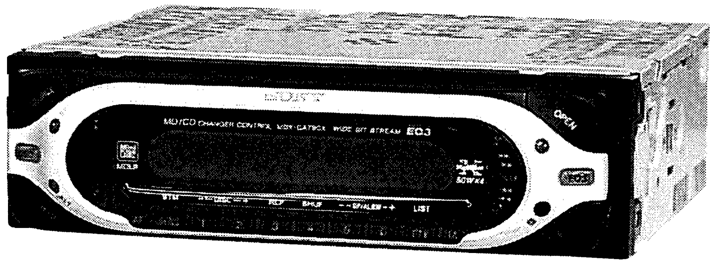
MDX-CA790X

SERVICE MANUAL

Ver 1.0 2003.03

AEP Model
UK Model



U.S. and foreign patents licensed from Dolby Laboratories.

Model Name Using Similar Mechanism	NEW
Base Mechanism Type	MG-165A-138
Optical Pick-up Name	KMS-242E

SPECIFICATIONS

MD Player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	67 dB (stereo), 69 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 279 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 40 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	50 W × 4 (at 4 ohms)

General

Outputs	Audio outputs (front) Audio outputs (rear) Power aerial relay control terminal Power amplifier control terminal
Inputs	Telephone ATT control terminal Remote controller input terminal BUS control input terminal BUS audio input terminal
Tone controls	Low ±10 dB at 60 Hz (XPLOD) Mid ±10 dB at 1 kHz (XPLOD) High ±10 dB at 10 kHz (XPLOD)
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 × 50 × 180 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections Front panel case (1)

Note
This unit cannot be connected to a digital preamplifier or an equalizer which is Sony BUS system compatible.

Design and specifications are subject to change without notice.

FM/MW/LW MINIDISC PLAYER

9-877-086-01 **Sony Corporation**
2003C0500-1 **e Vehicle Company**
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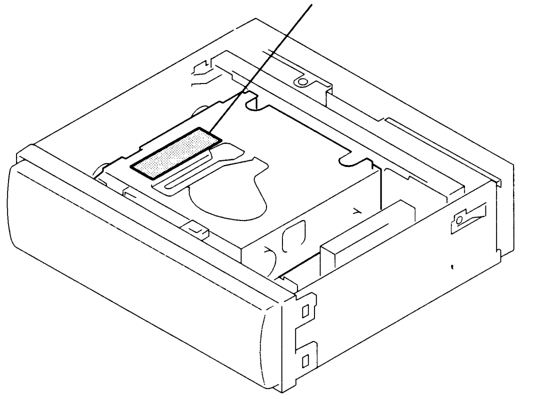
CLASS 1
LASER PRODUCT

This product is classified as a CLASS 1 LASER PRODUCT.
This label is located on the bottom of the chassis.

CAUTION—INVISIBLE LASER RADIATION WHEN OPEN
DO NOT STARE INTO BEAM OR
VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

This label is located on the drive unit's internal chassis. (Refer to below figure)

– Upper view –



During service do not take the Optical Pick-up Block apart and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including SERVO board).

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

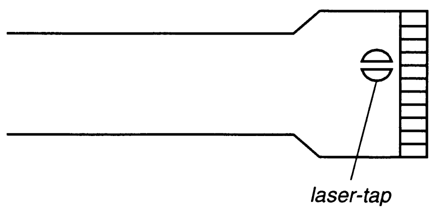
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right avove when checking it for adustment. It is feared that you will lose your sight.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-242E).

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform measures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

Notes on chip component replacement

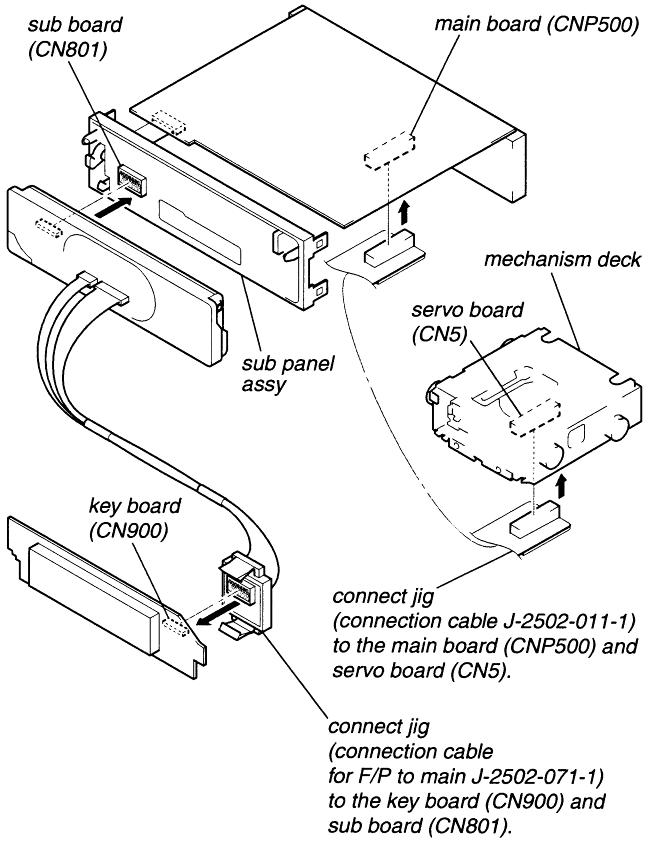
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SERVICE POSITION

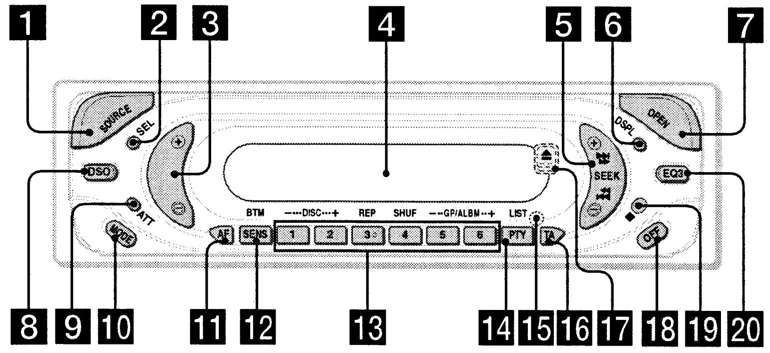
In checking the key board and main board, prepare two jigs (connection cable J-2502-011-1 and
connection cable for F/P to main J-2502-071-1).


sub board
(CN801)
main board (CNP500)
mechanism deck
servo board
(CN5)
sub panel
assy
key board
(CN900)
connect jig
(connection cable J-2502-011-1)
to the main board (CNP500) and
servo board (CN5).
connect jig
(connection cable
for F/P to main J-2502-071-1)
to the key board (CN900) and
sub board (CN801).

SECTION 2
GENERAL

This section is extracted from instruction manual.

Location of controls


1
2
3
4
5
6
7
SOURCE
SEL
DSO
ATT
MODE
BTM
—DISC—+
REP
SHUF
—GP/ALBM—+
LIST
AF
SENS
1
2
3
4
5
6
PTY
TA
DSPL
OPEN
SEEK
EQ3
OFF
8
9
10
11
12
13
14
15
16
17
18
19
20

1 **SOURCE (Power on/Radio/CD*1/MD) button**
Selecting the source

2 **SEL (select) button**
Selecting items.

3 **Volume +/– button**

4 **Display window**

5 **SEEK +/– button**
To skip tracks, fast-forward, reverse a track, tune in stations automatically, find a station manually.

6 **DSPL (display mode change) button**

7 **OPEN button**

8 **DSO button**

9 **ATT (attenuate) button**

10 **MODE button**
Changing the operation

11 **AF button**

12 **SENS/BTM button**

13 **Number buttons**
Radio:
Storing the desired station on each number button.
MD/CD*1:
(1): **DISC –*1**
(2): **DISC +*1**
(3): **REP**
(4): **SHUF**
(5): **GP*2/ALBM*3 –**
(6): **GP*2/ALBM*3 +**

14 **PTY (programme type) /LIST*1 button**

15 **RESET button** (located on the front side of the unit, behind the front panel)

16 **TA button**

17 **≙ (eject) button** (located on the front side of the unit, behind the front panel)

18 **OFF (Stop/Power off) button*4**

19 **Receptor for the card remote commander**

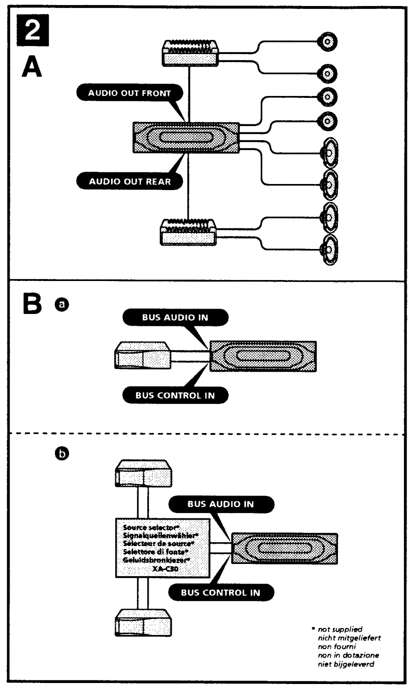
20 **EQ3 button**

*1 When an optional MD/CD unit is connected.

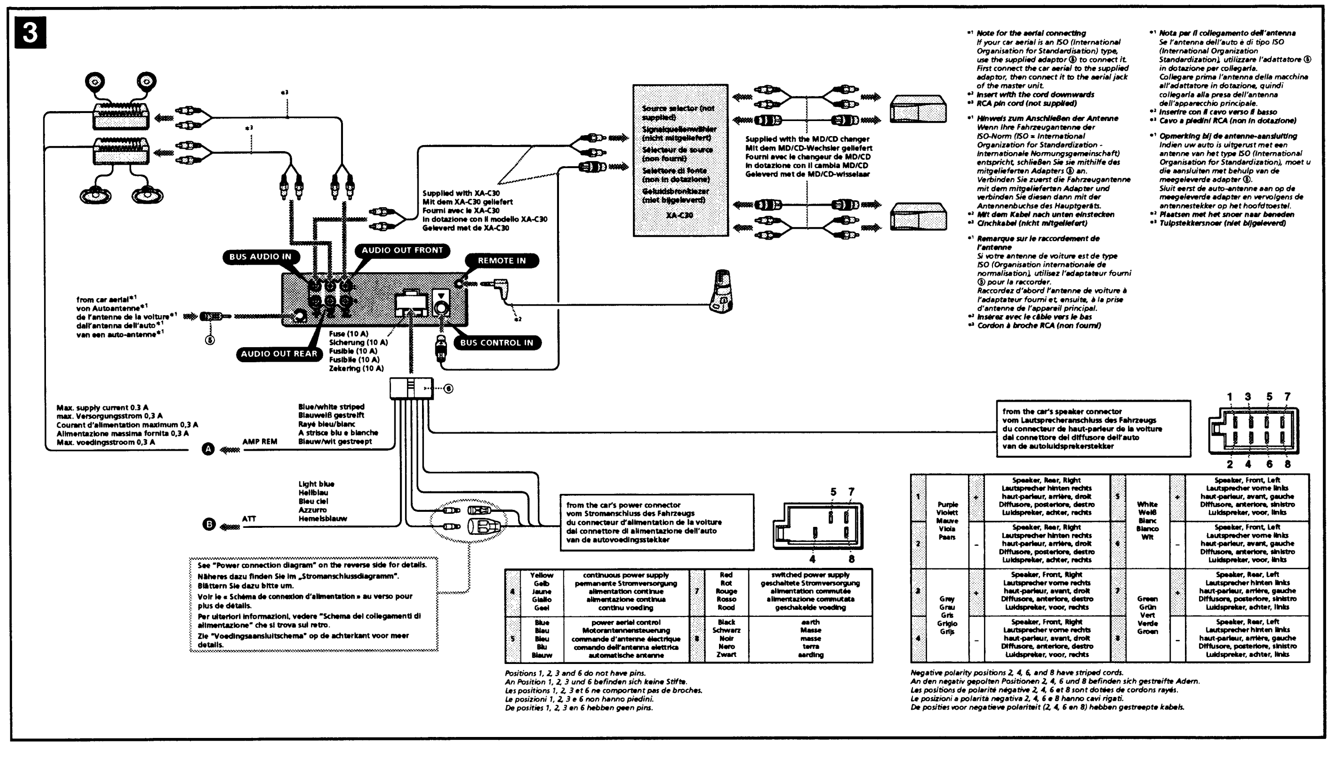
*2 Available only when an MD containing groups is inserted in this unit.

*3 Available only when an optional CD unit with the MP3 file control function is connected.

*4 **Warning when installing in a car without an ACC (accessory) position on the ignition switch**
After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.


2
A
AUDIO OUT FRONT
AUDIO OUT REAR
B
a
BUS AUDIO IN
BUS CONTROL IN
b
BUS AUDIO IN
Source selector*
Signalquellenwähler*
Sélecteur de source*
Selettore di fonte*
Geluidsbronkiezer*
XA-C30
BUS CONTROL IN
* not supplied
nicht mitgeliefert
non fourni
non in dotazione
niet bijgeleverd

3


3
*3
*3
Source selector (not supplied)
Signalquellenwähler (nicht mitgeliefert)
Sélecteur de source (non fourni)
Selettore di fonte (non in dotazione)
Geluidsbronkiezer (niet bijgeleverd)
XA-C30
Supplied with XA-C30
Mit dem XA-C30 geliefert
Fourni avec le XA-C30
In dotazione con il modello XA-C30
Geleverd met de XA-C30
Supplied with the MD/CD changer
Mit dem MD/CD-Wechsler geliefert
Fourni avec le changeur de MD/CD
In dotazione con il cambia MD/CD
Geleverd met de MD/CD-wisselaar
BUS AUDIO IN
AUDIO OUT FRONT
REMOTE IN
from car aerial*1
von Autoantenne*1
de l'antenne de la voiture*1
dall'antenna dell'auto*1
van een auto-antenne*1
⑤
*2
AUDIO OUT REAR
Fuse (10 A)
Sicherung (10 A)
Fusible (10 A)
Fusibile (10 A)
Zekering (10 A)
BUS CONTROL IN
⑥
Max. supply current 0.3 A
max. Versorgungsstrom 0,3 A
Courant d'alimentation maximum 0,3 A
Alimentazione massima fornita 0,3 A
Max. voedingsstroom 0,3 A
Ⓐ
AMP REM
Blue/white striped
Blauweiß gestreift
Rayé bleu/blanc
A strisce blu e bianche
Blauw/wit gestreept
Light blue
Hellblau
Bleu ciel
Azzurro
Hemelsblauw
Ⓑ
ATT
from the car's power connector
vom Stromanschluss des Fahrzeugs
du connecteur d'alimentation de la voiture
dal connettore di alimentazione dell'auto
van de autovoedingsstekker
5 7
4 8
from the car's speaker connector
vom Lautsprecheranschluss des Fahrzeugs
du connecteur de haut-parleur de la voiture
dal connettore del diffusore dell'auto
van de autoluidsprekerstekker
1 3 5 7
2 4 6 8

See "Power connection diagram" on the reverse side for details.
Näheres dazu finden Sie im „Stromanschlussdiagramm".
Blättern Sie dazu bitte um.
Voir le « Schéma de connexion d'alimentation » au verso pour plus de détails.
Per ulteriori informazioni, vedere "Schema dei collegamenti di alimentazione" che si trova sul retro.
Zie "Voedingsaansluitschema" op de achterkant voor meer details.

4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding	7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding
5	Blue Blau Bleu Blu Blauw	power aerial control Motorantennensteuerung commande d'antenne électrique comando dell'antenna elettrica automatische antenne	8	Black Schwarz Noir Nero Zwart	earth Masse masse terra aarding

Positions 1, 2, 3 and 6 do not have pins.
An Position 1, 2, 3 und 6 befinden sich keine Stifte.
Les positions 1, 2, 3 et 6 ne comportent pas de broches.
Le posizioni 1, 2, 3 e 6 non hanno piedini.
De posities 1, 2, 3 en 6 hebben geen pins.

1	Purple Violett Mauve Viola Paars	+	Speaker, Rear, Right Lautsprecher hinten rechts haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts	5	White Weiß Blanc Bianco Wit	+	Speaker, Front, Left Lautsprecher vorne links haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
2		–	Speaker, Rear, Right Lautsprecher hinten rechts haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts	6		–	Speaker, Front, Left Lautsprecher vorne links haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
3	Grey Grau Gris Grigio Grijs	+	Speaker, Front, Right Lautsprecher vorne rechts haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts	7	Green Grün Vert Verde Groen	+	Speaker, Rear, Left Lautsprecher hinten links haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links
4		–	Speaker, Front, Right Lautsprecher vorne rechts haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts	8		–	Speaker, Rear, Left Lautsprecher hinten links haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links

Negative polarity positions 2, 4, 6, and 8 have striped cords.
An den negativ gepolten Positionen 2, 4, 6 und 8 befinden sich gestreifte Adern.
Les positions de polarité négative 2, 4, 6 et 8 sont dotées de cordons rayés.
Le posizioni a polarità negativa 2, 4, 6 e 8 hanno cavi rigati.
De posities voor negatieve polariteit (2, 4, 6 en 8) hebben gestreepte kabels.

*1 ***Note for the aerial connecting***
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor ⑤ to connect it. First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.
*2 ***Insert with the cord downwards***
*3 ***RCA pin cord (not supplied)***

*1 ***Hinweis zum Anschließen der Antenne***
Wenn Ihre Fahrzeugantenne der ISO-Norm (ISO = International Organization for Standardization - Internationale Normungsgemeinschaft) entspricht, schließen Sie sie mithilfe des mitgelieferten Adapters ⑤ an. Verbinden Sie zuerst die Fahrzeugantenne mit dem mitgelieferten Adapter und verbinden Sie diesen dann mit der Antennenbuchse des Hauptgeräts.
*2 ***Mit dem Kabel nach unten einstecken***
*3 ***Cinchkabel (nicht mitgeliefert)***

*1 ***Remarque sur le raccordement de l'antenne***
Si votre antenne de voiture est de type ISO (Organisation internationale de normalisation), utilisez l'adaptateur fourni ⑤ pour la raccorder. Raccordez d'abord l'antenne de voiture à l'adaptateur fourni et, ensuite, à la prise d'antenne de l'appareil principal.
*2 ***Insérez avec le câble vers le bas***
*3 ***Cordon à broche RCA (non fourni)***

*1 ***Nota per il collegamento dell'antenna***
Se l'antenna dell'auto è di tipo ISO (International Organization Standardization), utilizzare l'adattatore ⑤ in dotazione per collegarla. Collegare prima l'antenna della macchina all'adattatore in dotazione, quindi collegarla alla presa dell'antenna dell'apparecchio principale.
*2 ***Inserire con il cavo verso il basso***
*3 ***Cavo a piedini RCA (non in dotazione)***

*1 ***Opmerking bij de antenne-aansluiting***
Indien uw auto is uitgerust met een antenne van het type ISO (International Organisation for Standardization), moet u die aansluiten met behulp van de meegeleverde adapter ⑤. Sluit eerst de auto-antenne aan op de meegeleverde adapter en vervolgens de antennestekker op het hoofdtoestel.
*2 ***Plaatsen met het snoer naar beneden***
*3 ***Tulpstekkersnoer (niet bijgeleverd)***

Cautions

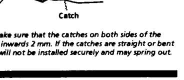
- This unit is designed for negative earth 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the power connecting cord ⑥ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Be sure to insulate any loose unconnected wires with electrical tape for safety.

Notes on the power supply cord (yellow)
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Parts list (1)

- The numbers in the list are keyed to those in the instructions.
- The bracket ① and the protection collar ④ are attached to the unit before shipping. Before mounting the unit, use the release keys ⑦ to remove the bracket ① and the protection collar ④ from the unit. For details, see "Removing the protection collar and the bracket (4)" on the reverse side of the sheet.
- **Keep the release keys ⑦ for the future use as they are also necessary if you remove the unit from your car.**

Caution
Handle the bracket ① carefully to avoid injuring your fingers.



Note
Before installing, make sure that the catches on both sides of the bracket ① are bent inwards 2 mm. If the catches are straight or bent outwards, the unit will not be installed securely and may spring out.

Connection example (2)

Notes (2-A)
- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Tip (2-B-●)
For connecting two or more MD/CD changers, the source selector XA-C30 (optional) is necessary.

Connection diagram (3)

Ⓐ **To AMP REMOTE IN of an optional power amplifier**
This connection is only for amplifiers. Connecting any other system may damage the unit.

Ⓑ **To the interface cable of a car telephone**

Warning
If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑥ may damage the aerial.

Notes on the control leads
- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), TA (Traffic Announcement) function.*
- *When your car has built-in FM/MW/LW aerial in the rear/side glass, connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.*
- *A power aerial without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the earth lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker wires installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker cords to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Vorsicht

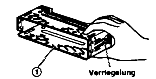
- Dieses Gerät ist ausschließlich für den Betrieb bei 12 V Gleichstrom (negative Erdung) bestimmt.
- Achten Sie darauf, dass die Kabel nicht unter einer Schraube oder zwischen beweglichen Teilen wie z. B. in einer Sitzschiene eingeklemmt werden.
- Schalten Sie, bevor Sie irgendwelche Anschlüsse vornehmen, die Zündung des Fahrzeugs aus, um Kurzschlüsse zu vermeiden.
- Verbinden Sie das Stromversorgungskabel ⑥ mit dem Gerät und den Lautsprechern, bevor Sie es mit dem Hilfsstromanschluss verbinden.
- **Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.**
- Aus Sicherheitsgründen müssen alle losen, nicht angeschlossenen Drähte mit Isolierband isoliert werden.

Hinweise zum Stromversorgungskabel (gelb)
- Wenn Sie dieses Gerät zusammen mit anderen Stereokomponenten anschließen, muss der Autostromkreis, an den die Geräte angeschlossen sind, eine höhere Leistung aufweisen als die Summe der Sicherungen der einzelnen Komponenten.
- Wenn kein Autostromkreis eine so hohe Leistung aufweist, schließen Sie das Gerät direkt an die Batterie an.

Teileliste (1)

- Die Nummern in der Liste sind dieselben wie im Erläuterungstext.
- Die Halterung ① und die Schutzumrandung ④ werden vor dem Ausliefern am Gerät angebracht. Bevor Sie das Gerät montieren, nehmen Sie die Halterung ① und die Schutzumrandung ④ mithilfe der Löseschlüssel ⑦ bitte vom Gerät ab. Einzelheiten dazu finden Sie unter „Abnehmen der Schutzumrandung und der Halterung (4)" auf der Rückseite dieses Blattes.
- **Bewahren Sie die Löseschlüssel ⑦ für den späteren Gebrauch auf. Sie werden z. B. benötigt, wenn Sie das Gerät aus dem Fahrzeug ausbauen wollen.**

Sicherheitshinweis
Seien Sie beim Umgang mit der Halterung ① vorsichtig, damit Sie sich nicht die Hände verletzen.



Hinweis
Vergewissern Sie sich vor dem Installieren, dass die Verriegelungen an beiden Seiten der Halterung ① um 2 mm nach innen gebogen sind. Wenn die Verriegelungen gerade oder nach außen gebogen sind, lässt sich das Gerät nicht sicher installieren und kann herausspringen.

Anschlussbeispiel (2)

Hinweise (2-A)
- *Schließen Sie unbedingt zuerst das Massekabel an, bevor Sie den Verstärker anschließen.*
- *Wenn Sie einen gesondert erhältlichen Endverstärker anschließen und den integrierten Verstärker nicht benutzen, wird der Signalton deaktiviert.*

Tipp (2-B-●)
Zum Anschließen von zwei oder mehr MD/CD-Wechslern wird der gesondert erhältliche Signalquellenwähler XA-C30 benötigt.

Anschlussdiagramm (3)

Ⓐ **An AMP REMOTE IN des gesondert erhältlichen Endverstärkers**
Dieser Anschluss ist ausschließlich für Verstärker gedacht. Schließen Sie nichts anderes daran an. Andernfalls kann das Gerät beschädigt werden.

Ⓑ **An Schnittstellenkabel eines Autotelefons**

Warnung
Wenn Sie eine Motorantenne ohne Relaiskästchen verwenden, kann durch Anschließen dieses Geräts mit dem mitgelieferten Stromversorgungskabel ⑥ die Antenne beschädigt werden.

Hinweise zu den Steuerleitungen
- *Die Motorantennen-Steuerleitung (blau) liefert +12 V Gleichstrom, wenn Sie den Tuner einschalten oder die AF- (Alternativfrequenzsuche) oder die TA-Funktion (Verkehrsdurchsagen) aktivieren.*
- *Wenn das Fahrzeug mit einer in der Heck-/Seitenfensterscheibe integrierten FM (UKW)/MW/LW-Antenne ausgestattet ist, schließen Sie die Motorantennen-Steuerleitung (blau) oder die Zubehörstromversorgungsleitung (rot) an den Stromversorgungsanschluss des vorhandenen Antennenverstärkers an. Näheres dazu erfahren Sie bei Ihrem Händler.*
- *Es kann nur eine Motorantenne mit Relaiskästchen angeschlossen werden.*

Stromversorgung des Speichers
Wenn die gelbe Stromversorgungsleitung angeschlossen ist, wird der Speicher stets (auch bei ausgeschalteter Zündung) mit Strom versorgt.

Hinweise zum Lautsprecheranschluss
- *Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.*
- *Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.*
- *Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenchassis und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautsprechers.*
- *Verbinden Sie die Masseleitung dieses Geräts nicht mit dem negativen (–) Lautsprecheranschluss.*
- *Versuchen Sie nicht, Lautsprecher parallel anzuschließen.*
- *An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie keine Aktivlautsprecher (Lautsprecher mit eingebauten Verstärkern) an, da das Gerät sonst beschädigt werden könnte.*
- *Um Fehlfunktionen zu vermeiden, verwenden Sie nicht die im Fahrzeug installierten, integrierten Lautsprecherleitungen, wenn am Ende eine gemeinsame negative (–) Leitung für den rechten und den linken Lautsprecher verwendet wird.*
- *Verbinden Sie nicht die Lautsprecherkabel des Geräts miteinander.*

Hinweis zum Anschließen
Wenn Lautsprecher und Verstärker nicht richtig angeschlossen sind, erscheint "FAILURE" im Display. Vergewissern Sie sich in diesem Fall, dass Lautsprecher und Verstärker richtig angeschlossen sind.

Précautions

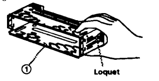
- Cet appareil est conçu pour fonctionner sur un courant continu de 12 V avec une masse négative uniquement.
- Evitez de fixer des vis sur les câbles ou de coincer ceux-ci dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer des raccordements, éteignez le moteur pour éviter les courts-circuits.
- Branchez le cordon d'alimention ⑥ sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- **Rassemblez tous les fils de terre en un point de masse commun.**
- Par mesure de sécurité, veillez à isoler tout fil ou câble non connecté avec du chatterton.

Remarques sur le cordon d'alimentation (jaune)
- Lorsque cet appareil est raccordé à d'autres appareils stéréo, la valeur nominale des circuits de la voiture raccordée doit être supérieure à la somme des fusibles de chaque appareil.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

Liste des composants (1)

- Les numéros de la liste correspondent à ceux des instructions.
- Le support ① et le tour de protection ④ sont fixés à l'appareil avant de quitter l'usine. Avant le montage de l'appareil, utilisez les clés de déblocage ⑦ pour détacher le support ① et le tour de protection ④ de l'appareil. Pour de plus amples informations, reportez-vous à la section « Retrait du tour de protection et du support (4) » au verso de la feuille.
- **Conservez les clés de déblocage ⑦ pour une utilisation ultérieure car vous en aurez également besoin pour retirer l'appareil de votre véhicule.**

Précaution
Manipulez précautionneusement le support ① pour éviter de vous blesser aux doigts.



Remarque
Avant l'installation, assurez-vous que les loquets des deux côtés du support ① sont bien pliés de 2 mm vers l'intérieur. Si les loquets sont droits ou pliés vers l'extérieur, l'appareil ne peut pas être fixé solidement et peut se détacher.

Exemple de raccordement (2)

Remarques (2-A)
- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance en option et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé.*

Conseil (2-B-●)
Dans le cas du raccordement de deux changeurs de MD/CD ou plus, le sélecteur de source XA-C30 (en option) est indispensable.

Schéma de raccordement (3)

Ⓐ **Au niveau du AMP REMOTE IN d'un amplificateur de puissance en option**
Ce raccordement existe seulement pour les amplificateurs. Le raccordement à tout autre système peut endommager l'appareil.

Ⓑ **Vers le câble d'interface d'un téléphone de voiture**

Avertissement
Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni ⑥ risque d'endommager l'antenne.

Remarques sur les fils de commande
- *Le fil de commande (bleu) fournit du courant continu de +12 V lorsque vous allumez le sélecteur de canaux ou lorsque vous activez la fonction TA (messages de radioguidage) en AF (fréquence alternative).*
- *Lorsque votre voiture est équipée d'une antenne FM/MW/LW intégrée dans la vitre arrière/latérale, raccordez le fil de commande de l'antenne (bleu) ou l'entrée d'alimentation des accessoires (rouge) à la borne de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Raccordement pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est en position d'arrêt.

Remarques sur le raccordement des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas raccorder le câble de masse de cet appareil à la borne négative (–) du haut-parleur.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas connecter d'enceintes actives (avec amplificateurs intégrés) aux bornes d'enceinte de cet appareil, pour éviter d'endommager l'appareil. Veiller à raccorder des enceintes passives uniquement.*
- *Pour éviter tout dysfonctionnement, ne pas utiliser les fils des haut-parleurs intégrés installés dans votre voiture si l'appareil dispose d'un fil négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne pas raccorder entre eux les cordons des haut-parleurs de l'appareil.*

Remarque sur le raccordement
Si les enceintes et l'amplificateur ne sont pas raccordés correctement, le message « FAILURE » s'affiche. Dans ce cas, assurez-vous que les enceintes et l'amplificateur sont raccordés correctement.

Attenzione

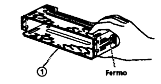
- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Evitare che i cavi rimangano bloccati da una vite o incastrati nelle parti mobili (ad esempio nelle guide scorrevoli dei sedili).
- Prima di effettuare i collegamenti, spegnere il motore dell'automobile onde evitare di causare cortocircuiti.
- Collegare il cavo di collegamento dell'alimentazione ⑥ all'apparecchio e ai diffusori prima di collegarlo al connettore di alimentazione ausiliaria.
- **Portare tutti i cavi di massa a un punto di massa comune.**
- Per sicurezza, assicurarsi di isolare qualsiasi cavo non collegato mediante apposito nastro.

Note sul cavo di alimentazione (giallo)
- Se questo apparecchio viene collegato in combinazione con altri componenti stereo, la potenza nominale dei circuiti dell'automobile collegati deve essere superiore a quella prodotta dalla somma dei fusibili di ciascun componente.
- Se la potenza nominale dei circuiti dell'automobile non è sufficiente, collegare l'apparecchio direttamente alla batteria.

Elenco dei componenti (1)

- I numeri nella lista corrispondono a quelli riportati nelle istruzioni.
- La staffa ① e la cornice di protezione ④ vengono applicati all'unità in fabbrica. Prima di installare l'unità, utilizzare le chiavi di rilascio ⑦ per rimuovere la staffa ① e la cornice di protezione ④ dall'apparecchio. Per ulteriori informazioni, vedere "Rimozione della staffa e della cornice di protezione (4)" sul lato opposto del foglio.
- **Conservare le chiavi di rilascio ⑦ per un uso futuro in quanto sono necessarie per rimuovere l'unità dall'auto.**

Attenzione
Maneggiare la staffa ① con cautela per evitare di ferirsi le mani.



Nota
Prima di installare l'unità, accertarsi di ripiegare i fermi presenti su entrambi i lati della staffa ① verso l'interno di 2 mm. Se i fermi sono diritti o ripiegati verso l'esterno, l'apparecchio non verrà installato in modo sicuro e potrebbe non essere saldo.

Esempi di collegamento (2)

Note (2-A)
- *Assicurarsi di collegare il cavo di terra prima di collegare l'apparecchio all'amplificatore.*
- *Se si collega un amplificatore di potenza opzionale e non si utilizza l'amplificatore incorporato, il segnale acustico verrà disattivato.*

Suggerimento (2-B-●)
Per collegare due o più cambia MD/CD, si deve utilizzare il selettore di fonte XA-C30 (opzionale).

Schema di collegamento (3)

Ⓐ **A AMP REMOTE IN di un amplificatore di potenza opzionale**
Questo collegamento è riservato esclusivamente agli amplificatori. Non collegare un tipo di sistema diverso onde evitare di causare danni all'apparecchio.

Ⓑ **Al cavo di interfaccia di un telefono per auto**

Avvertenza
Quando si collega l'apparecchio con il cavo di alimentazione in dotazione ⑥, si potrebbe danneggiare l'antenna elettrica se questa non ha la scatola a relè.

Note sui cavi di controllo
- *Il cavo (blu) di controllo dell'antenna elettrica fornisce alimentazione pari a +12 V CC quando si attiva il sintonizzatore o le funzioni TA (notiziario sul traffico) e AF (frequenza alternativa).*
- *Se l'automobile è dotata di antenna FM/MW/LW incorporata nel vetro posteriore/laterale, collegare il cavo (blu) di controllo dell'antenna elettrica o il cavo (rosso) di ingresso dell'alimentazione ausiliaria al terminale di alimentazione del preamplificatore dell'antenna esistente. Per ulteriori informazioni, consultare il proprio fornitore.*
- *Non è possibile usare un'antenna elettrica senza scatola a relè con questo apparecchio.*

Collegamento per la conservazione della memoria
Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando l'interruttore di accensione è spento.

Note sul collegamento dei diffusori
- *Prima di collegare i diffusori spegnere l'apparecchio.*
- *Usare diffusori di impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguata, onde evitare che vengano danneggiati.*
- *Non collegare i terminali del sistema diffusori al telaio dell'auto e non collegare i terminali del diffusore destro a quelli del diffusore sinistro.*
- *Non collegare il cavo di terra di questo apparecchio al terminale negativo (–) del diffusore.*
- *Non collegare i diffusori in parallelo.*
- *Assicurarsi di collegare soltanto diffusori passivi, poiché il collegamento di diffusori attivi, dotati di amplificatori incorporati, ai terminali dei diffusori potrebbe danneggiare l'apparecchio.*
- *Per evitare problemi di funzionamento, non utilizzare i cavi dei diffusori incorporati installati nell'automobile se l'apparecchio condivide un cavo comune negativo (–) per i diffusori destro e sinistro.*
- *Non collegare fra loro i cavi dei diffusori dell'apparecchio.*

Nota sui collegamenti
Se l'amplificatore e il diffusore non sono collegati correttamente, "FAILURE" viene visualizzato nel display. In tal caso, accertarsi che l'amplificatore e il diffusore siano collegati correttamente.

Let op!

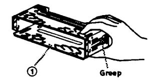
- Dit apparaat is ontworpen voor gebruik op gelijkstroom van een 12 Volts auto-accu, negatief geaard.
- Zorg ervoor dat de draden niet onder een schroef of tussen bewegende onderdelen (b.v. zetelrail) terechtkomen.
- Alvorens aansluitingen te verrichten moet u het contact uitzetten om kortsluiting te vermijden.
- Sluit het netsnoer ⑥ aan op het toestel en de luidsprekers vooraleer u het op de hulpvoedingsaansluiting aansluit.
- **Sluit alle aarddraden op een gemeenschappelijk aardpunt aan.**
- Voorzie niet aangesloten draden om veiligheidsredenen altijd van isolatietape.

Opmerkingen bij de voedingskabel (geel)
- Wanneer u dit toestel aansluit samen met andere componenten, moet het vermogen van de aangesloten autostroomkring groter zijn dan de som van de zekeringen van elke component afzonderlijk.
- Wanneer het vermogen ontoereikend is, moet u het toestel rechtstreeks aansluiten op de accu.

Onderdelenlijst (1)

- De nummers in de afbeelding verwijzen naar die in de montage-aanwijzingen.
- De beugel ① en de beschermende rand ④ worden bevestigd op het toestel voordat dit wordt verzonden. Voordat u het toestel plaatst, moet u de ontgrendelingssleutels ⑦ gebruiken om de beugel ① en de beschermende rand ④ te verwijderen van het toestel. Zie "De beschermende rand en de beugel verwijderen (4)" aan de achterzijde van dit vel voor meer informatie.
- **Bewaar de ontgrendelingssleutels ⑦ voor toekomstig gebruik omdat u deze ook nodig hebt om het toestel uit de auto te verwijderen.**

Opgelet
Houd de beugel ① voorzichtig vast zodat u uw vingers niet verwondt.



Opmerking
Voordat u het toestel installeert, moet u de grepen aan beide zijden van de beugel ① 2 mm naar binnen buigen. Als de grepen recht zijn of naar buiten gebogen, kan het toestel niet goed worden bevestigd en kan dit losschieten.

Voorbeeldaansluitingen (2)

Opmerkingen (2-A)
- *Sluit eerst de massakabel aan alvorens de versterker aan te sluiten.*
- *Als u een los verkrijgbare vermogensversterker aansluit en de ingebouwde versterker niet gebruikt, is de pieptoon uitgeschakeld.*

Tip (2-B-●)
Om twee of meer MD/CD-wisselaars aan te sluiten, hebt u de geluidsbronkiezer XA-C30 (optioneel) nodig.

Aansluitschema (3)

Ⓐ **Naar AMP REMOTE IN van een los verkrijgbare vermogensversterker**
Deze aansluiting is alleen bedoeld voor versterkers. Door een ander systeem aan te sluiten kan het toestel worden beschadigd.

Ⓑ **Naar het interface-snoer van een autotelefoon**

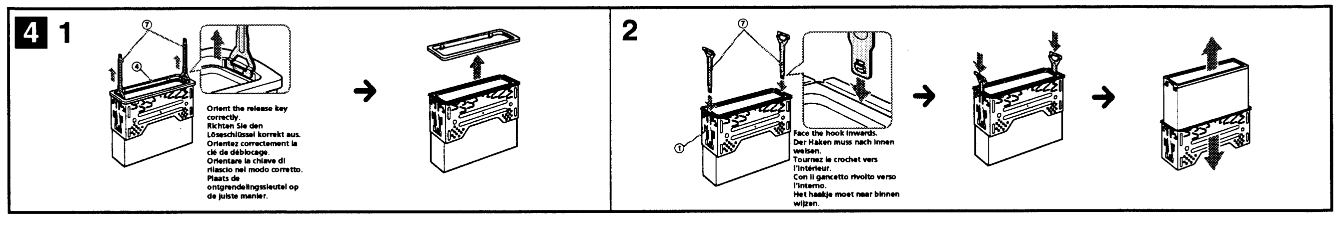
Opgelet
Indien u een elektrische antenne heeft zonder relaiskast, kan het aansluiten van deze eenheid met het bijgeleverde netsnoer ⑥ de antenne beschadigen.

Opmerking betreffende de aansluitsnoeren
- *De antennevoedingskabel (blauw) levert +12 V gelijkstroom wanneer u de tuner inschakelt of de AF (Alternative Frequency), TA (Traffic Announcement) functie activeert.*
- *Wanneer uw auto is uitgerust met een FM/MW/LW-antenne in de achterruit/voorruit, moet u de antennevoedingskabel (blauw) of de hulpvoedingskabel (rood) aansluiten op de voedingsingang van de bestaande antenneversterker. Raadpleeg uw dealer voor meer details.*
- *Met dit apparaat is het niet mogelijk een automatische antenne zonder relaiskast te gebruiken.*

Instandhouden van het geheugen
Zolang de gele stroomdraad is aangesloten, blijft de stroomvoorziening van het geheugen intact, ook wanneer het contact van de auto wordt uitgeschakeld.

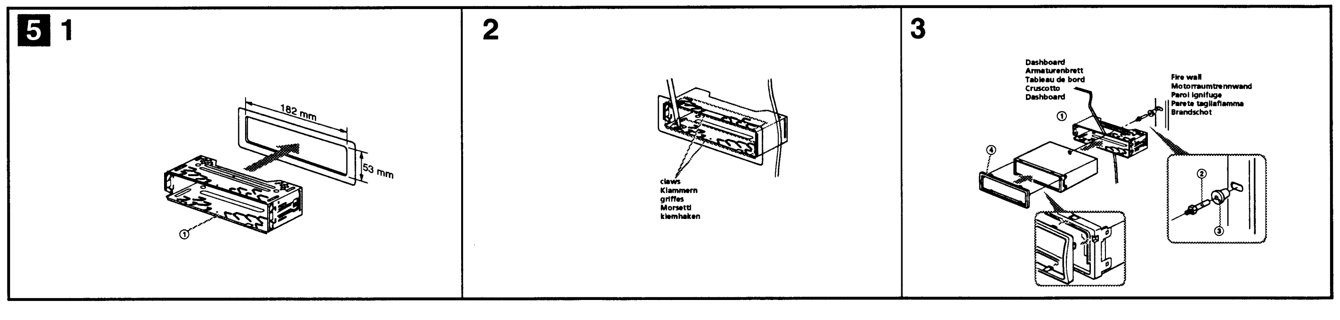
Opmerkingen betreffende het aansluiten van de luidsprekers
- *Zorg dat het apparaat is uitgeschakeld, alvorens de luidsprekers aan te sluiten.*
- *Gebruik luidsprekers met een impedantie van 4 tot 8 Ohm en let op dat die het vermogen van de versterker kunnen verwerken. Als dit wordt verzuimd, kunnen de luidsprekers ernstig beschadigd raken.*
- *Verbind in geen geval de aansluitingen van de luidsprekers met het chassis van de auto en sluit de aansluitingen van de rechter en linker luidspreker niet op elkaar aan.*
- *Verbind de massakabel van dit toestel niet met de negatieve (–) aansluiting van de luidspreker.*
- *Probeer nooit de luidsprekers parallel aan te sluiten.*
- *Sluit geen actieve luidsprekers (met ingebouwde versterkers) aan op de luidspreker-aansluiting van dit apparaat. Dit zal leiden tot beschadiging van de actieve luidsprekers. Sluit dus altijd uitsluitend luidsprekers zonder ingebouwde versterker aan.*
- *Om defecten te vermijden mag u de bestaande luidsprekerbedrading in uw auto niet gebruiken wanneer er een gemeenschappelijke negatieve (–) draad is voor de rechter en linker luidsprekers.*
- *Verbind de luidsprekerdraden niet met elkaar.*

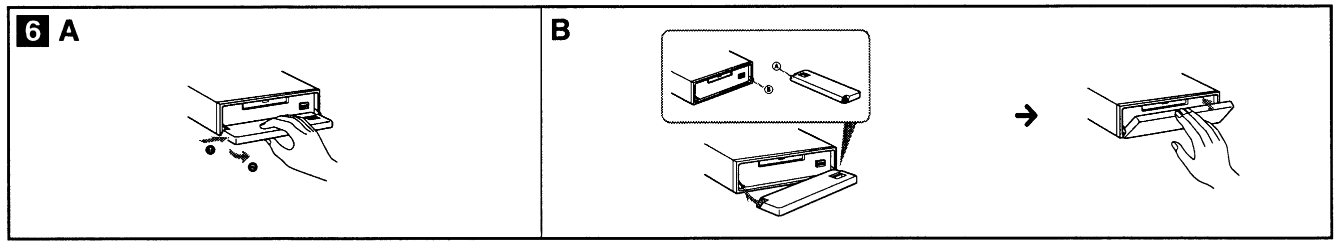
Opmerking over aansluiten
Als de luidspreker en versterker niet correct zijn aangesloten, wordt "FAILURE" in het display weergegeven. In dit geval moet u zorgen dat de luidspreker en versterker correct zijn aangesloten.



Orient the release key correctly.
Richten Sie den Löseschlüssel korrekt aus.
Orientez correctement la clé de déblocage.
Orientare la chiave di rilascio nel modo corretto.
Plaats de ontgrendelingssleutel op de juiste manier.

Face the hook inwards.
Der Haken muss nach innen weisen.
Tournez le crochet vers l'intérieur.
Con il gancetto rivolto verso l'interno.
Het haakje moet naar binnen wijzen.





Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperature, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment
Adjust the mounting angle to less than 30°.

Removing the protection collar and the bracket (4)

Before installing the unit, remove the protection collar ④ and the bracket ① from the unit.

1. **Remove the protection collar ④.**
   ❶ Engage the release keys ⑦ together with the protection collar ④.
   ❷ Pull out the release keys ⑦ to remove the protection collar ④.
2. **Remove the bracket ①.**
   ❶ Insert both release keys ⑦ together between the unit and the bracket ① until they click.
   ❷ Pull down the bracket ①, then pull up the unit to separate.

Mounting example (5)

Installation in the dashboard

Notes
- *Bend these claws outward for a tight fit, if necessary (5-2).*
- *Make sure that the 4 catches on the protection collar ④ are properly engaged in the slots of the unit (5-3).*

How to detach and attach the front panel (6)

Before installing the unit, detach the front panel.

6-A To detach
Before detaching the front panel, be sure to press OFF. Press OPEN, then slide the front panel to the right side, and pull out the left side.

6-B To attach
Place the hole Ⓐ in the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.

Warning when installing in a car without ACC (accessory) position on the ignition key switch

After turning off the ignition, be sure to press and hold OFF on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.

RESET button

When the installation and connections are completed, be sure to press the RESET button with a ballpoint pen, etc., after detaching the front panel.

Vorsichtsmaßnahmen

- Wählen Sie den Einbauort sorgfältig so aus, dass das Gerät beim Fahren nicht hinderlich ist.
- Bauen Sie das Gerät so ein, dass es keinen hohen Temperaturen (keinem direkten Sonnenlicht, keiner Warmluft von der Heizung), keinem Staub, keinem Schmutz und keinen starken Vibrationen ausgesetzt ist.
- Für eine sichere Befestigung verwenden Sie stets nur die mitgelieferten Montageteile.

Hinweis zum Montagewinkel
Das Gerät sollte in einem Winkel von weniger als 30° montiert werden.

Abnehmen der Schutzumrandung und der Halterung (4)

Nehmen Sie vor dem Installieren des Geräts die Schutzumrandung ④ und die Halterung ① vom Gerät ab.

1. **Entfernen Sie die Schutzumrandung ④.**
   ❶ Setzen Sie beide Löseschlüssel ⑦ an der Schutzumrandung ④ an.
   ❷ Ziehen Sie die Schutzumrandung ④ mithilfe der Löseschlüssel ⑦ heraus.
2. **Entfernen Sie die Halterung ①.**
   ❶ Führen Sie beide Löseschlüssel ⑦ zwischen dem Gerät und der Halterung ① ein, bis sie mit einem Klicken einrasten.
   ❷ Ziehen Sie die Halterung ① nach unten und das Gerät nach oben, um die beiden zu trennen.

Montagebeispiel (5)

Installation im Armaturenbrett

Hinweise
- *Falls erforderlich, diese Klammern für einen sicheren Halt hochbiegen (5-2).*
- *Achten Sie darauf, die 4 Verriegelungen an der Schutzumrandung ④ korrekt in die Aussparungen am Gerät einzusetzen (5-3).*

Abnehmen und Anbringen der Frontplatte (6)

Nehmen Sie die Frontplatte vor dem Einbau des Geräts ab.

6-A Abnehmen
Schalten Sie das Gerät vor dem Abnehmen der Frontplatte unbedingt mit OFF aus. Drücken Sie OPEN und ziehen Sie sie auf sich zu heraus.

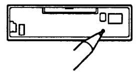
6-B Anbringen
Setzen Sie Teil Ⓐ der Frontplatte wie in der Abbildung dargestellt an Teil Ⓑ des Geräts an und drücken Sie die linke Seite der Frontplatte an, bis sie mit einem Klicken einrastet.

Warnhinweis zur Installation des Geräts in einem Auto mit Zündschloss ohne Zubehörposition ACC oder I

Nachdem Sie die Zündung ausgeschaltet haben, halten Sie am Gerät unbedingt OFF gedrückt, bis die Anzeige ausgeblendet wird.
Andernfalls wird die Anzeige nicht ausgeschaltet und der Autobatterie wird Strom entzogen.

Taste RESET

Wenn Sie das Gerät eingebaut und alle Anschlüsse vorgenommen haben, müssen Sie die Frontplatte abnehmen und mit einem Kugelschreiber oder einem anderen spitzen Gegenstand die Taste RESET drücken.



Précautions

- Choisir soigneusement l'emplacement de l'installation afin que l'appareil ne gêne pas la conduite normale du véhicule.
- Eviter d'installer l'appareil dans un endroit exposé à de la poussière, de la saleté, des vibrations violentes ou à des températures élevées, comme en plein soleil ou à proximité d'une bouche d'air chaud.
- Pour garantir un montage sûr, n'utiliser que le matériel de montage fourni.

Réglage de l'angle de montage
Ajuster l'inclinaison à un angle inférieur à 30°.

Retrait du tour de protection et du support (4)

Avant d'installer l'appareil, retirez le tour de protection ④ et le support ① de l'appareil.

1. **Retirez le tour de protection ④.**
   ❶ Accrochez les clés de déblocage ⑦ simultanément dans le tour de protection ④.
   ❷ Tirez sur les clés de déblocage ⑦ pour retirer le tour de protection ④.
2. **Retirez le support ①.**
   ❶ Insérez les deux clés de déblocage ⑦ simultanément entre l'appareil et le support ① jusqu'au déclic indiquant qu'elles sont en place.
   ❷ Tirez le support ① vers le bas, puis tirez l'appareil vers le haut pour les séparer.

Exemple de montage (5)

Installation dans le tableau de bord

Remarques
- *Plier ces griffes pour assurer une prise correcte si nécessaire (5-2).*
- *Assurez-vous que les 4 taquets du tour de protection ④ sont correctement insérés dans les fentes de l'appareil (5-3).*

Retrait et pose de la façade (6)

Avant d'installer l'appareil, déposez la façade.

6-A Retrait
Avant de déposer la façade, ne pas oublier d'appuyer sur OFF. Appuyer ensuite sur OPEN, puis faire glisser la façade vers la droite et extraire le côté gauche.

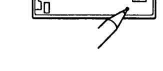
6-B Fixation
Fixer la partie Ⓐ de la façade sur la partie Ⓑ de l'appareil, comme indiqué sur l'illustration, puis appuyer sur le côté gauche jusqu'au déclic

Avertissement en cas d'installation dans une voiture dont le contact ne comporte pas de position ACC (accessoires)

Après avoir coupé le moteur, n'oubliez pas de maintenir la touche OFF sur l'appareil enfoncée jusqu'à ce que l'affichage disparaisse.
Sinon, l'affichage n'est pas désactivé et la batterie se décharge.

Touche RESET

Après avoir retiré la façade, une fois que l'installation et les raccordements sont terminés, appuyez sur la touche RESET avec un stylo à bille, etc.



Precauzioni

- Scegliere con attenzione la posizione per l'installazione in modo che l'apparecchio non interferisca con le operazioni di guida del conducente.
- Evitare di installare l'apparecchio dove sia soggetto ad alte temperature, come alla luce solare diretta o al getto di aria calda dell'impianto di riscaldamento, o dove possa essere soggetto a polvere, sporco e vibrazioni eccessive.
- Usare solo il materiale di montaggio in dotazione per un'installazione stabile e sicura.

Regolazione dell'angolo di montaggio
Regolare l'angolo di montaggio in modo che sia inferiore a 30°.

Rimozione della staffa e della cornice di protezione (4)

Prima di installare l'apparecchio, rimuovere la cornice di protezione ④ e la staffa ① dall'apparecchio.

1. **Rimuovere la cornice di protezione ④.**
   ❶ Inserire le chiavi di rilascio ⑦ insieme alla cornice di protezione ④.
   ❷ Per rimuovere la cornice di protezione ④, estrarre le chiavi di rilascio ⑦.
2. **Rimuovere la staffa ①.**
   ❶ Inserire contemporaneamente entrambe le chiavi di rilascio ⑦ tra l'apparecchio e la staffa ① fino a che non scattano in posizione.
   ❷ Estrarre la staffa ①, quindi sollevare l'apparecchio per rimuovere la staffa.

Esempio di montaggio (5)

Installazione nel cruscotto

Note
- *Piegare verso l'esterno questi morsetti per un'installazione più sicura, se necessario (5-2).*
- *Assicurarsi che i 4 fermi sulla cornice di protezione ④ siano correttamente inseriti negli alloggiamenti dell'apparecchio (5-3).*

Come rimuovere e reinserire il pannello anteriore (6)

Prima di installare l'apparecchio rimuovere il pannello anteriore.

6-A Per rimuoverlo
Prima di rimuovere il pannello anteriore, premere OFF. Premere OPEN, quindi fare scorrere il pannello anteriore verso destra ed estrarne il lato sinistro.

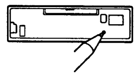
6-B Per reinserirlo
Posizionare il foro Ⓐ del pannello anteriore nel mandrino Ⓑ dell'apparecchio come illustrato, quindi spingere il lato sinistro del pannello verso l'interno.

Informazioni importanti per quando si effettua l'installazione su un'auto sprovvista della posizione ACC (accessoria) sull'interruttore di accensione

Dopo avere spento il motore, assicurarsi di tenere premuto OFF sull'apparecchio finché il display non scompare.
Diversamente, il display non viene disattivato e questo potrebbe causare lo scaricamento della batteria.

Tasto RESET

Una volta rimosso il pannello anteriore e dopo aver terminato l'installazione e i collegamenti, assicurarsi di premere il tasto RESET con la punta di una penna a sfera e simili.



Voorzorgsmaatregelen

- Kies de installatieplaats zorgvuldig zodat het toestel de bestuurder niet hindert tijdens het rijden.
- Installeer het apparaat niet op plaatsen waar het blootgesteld wordt aan hoge temperaturen, b.v. in direct zonlicht of bij de warme luchtstroom van de autoverwarming, aan sterke trillingen, of waar het in contact komt met veel stof of vuil.
- Gebruik voor het veilig en stevig monteren van het apparaat uitsluitend de bijgeleverde montage-onderdelen.

Maximale montagehoek
Installeer het apparaat nooit onder een hoek van meer dan 30° met het horizontale vlak.

De beschermende rand en de beugel verwijderen (4)

Voordat u het toestel gaat installeren, moet u de beschermende rand ④ en de beugel ① verwijderen van het toestel.

1. **Verwijder de beschermende rand ④.**
   ❶ Bevestig de ontgrendelingssleutels ⑦ op de beschermende rand ④.
   ❷ Trek de ontgrendelingssleutels ⑦ naar u toe om de beschermende rand ④ te verwijderen.
2. **Verwijder de beugel ①.**
   ❶ Plaats de ontgrendelingssleutels ⑦ tussen het toestel en de beugel ① tot deze vastklikken.
   ❷ Trek de beugel ① omlaag en trek het toestel omhoog om deze van elkaar te scheiden.

Montagevoorbeeld (5)

Montage in het dashboard

Opmerkingen
- *Indien nodig kunt u deze lipjes ombuigen voor een steviger bevestiging (5-2).*
- *De 4 grepen op de beschermende rand ④ moeten goed in de sleuven van het toestel zijn geplaatst (5-3).*

Verwijderen en bevestigen van het afneembare voorpaneel (6)

Verwijder, alvorens met het installeren te beginnen, het afneembare voorpaneel.

6-A Verwijderen
Vergeet niet, voordat u het voorpaneel verwijdert, eerst op OFF te drukken. Druk vervolgens op de OPEN toets en trek het naar u toe.

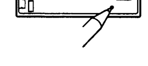
6-B Bevestigen
Breng deel Ⓐ van het voorpaneel aan op deel Ⓑ van het apparaat zoals afgebeeld en druk op de linkerzijde tot deze vastklikt.

Opgelet bij het monteren in een auto waarvan het contactslot geen ACC (accessory) stand heeft

Als de motor is uitgeschakeld, moet u op OFF drukken en deze toets ingedrukt houden tot de weergave verdwijnt.
Als u dit niet doet, wordt de weergave niet uitgeschakeld en raakt de batterij uitgeput.

RESET-toets

Na het installeren en verrichten van alle aansluitingen, moet u altijd het voorpaneel verwijderen en de RESET-toets indrukken met een balpen of dergelijke.



Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord.
After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

Stromanschlussdiagramm

Der Hilfsstromanschluss kann je nach Fahrzeugtyp unterschiedlich sein. Sehen Sie im Hilfsstromanschlussdiagramm für Ihr Fahrzeug nach, wie die Verbindung ordnungsgemäß vorgenommen werden muss. Es gibt, wie unten abgebildet, drei grundlegende Typen.
Sie müssen möglicherweise die rote und gelbe Leitung des Stromversorgungskabels der Autostereoanlage vertauschen.
Stellen Sie die Anschlüsse her, schließen Sie die geschalteten Stromversorgungsleitungen richtig an und verbinden Sie dann das Gerät mit der Stromversorgung Ihres Fahrzeugs. Wenn beim Anschließen des Geräts Fragen oder Probleme auftreten, die in dieser Bedienungsanleitung nicht erläutert werden, wenden Sie sich bitte an den Autohändler.

Schéma de raccordement de l'alimentation

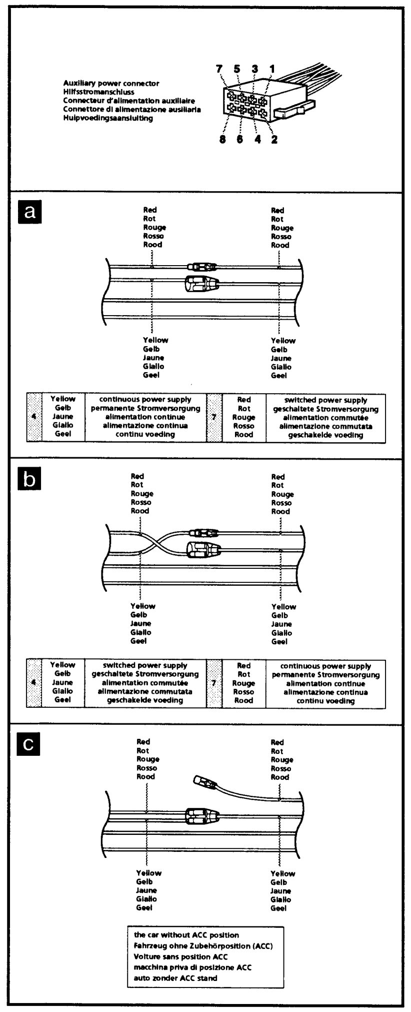
Le connecteur d'alimentation auxiliaire peut varier suivant le type de voiture. Vérifiez le schéma du connecteur d'alimentation auxiliaire de votre voiture pour vous assurer que les connexions correspondent. Il en existe trois types de base (illustrés ci-dessous). Il se peut que vous deviez commuter la position du fil rouge et jaune du cordon d'alimentation de l'autoradio.
Après avoir établi les connexions et commuté correctement les fils d'alimentation, raccordez l'appareil à l'alimentation de la voiture. Si vous avez des questions ou des difficultés à propos de cet appareil qui ne sont pas abordées dans le présent mode d'emploi, consultez votre concessionnaire automobile.

Schema dei collegamenti di alimentazione

Il connettore di alimentazione ausiliaria può variare a seconda della macchina.
Controllare lo schema del connettore di alimentazione ausiliaria della macchina per essere sicuri che le connessioni corrispondano correttamente. Vi sono tre tipi di base (illustrazione sotto). Potrà essere necessario cambiare le posizioni dei cavi rosso e giallo nel cavo di alimentazione dello stereo della macchina. Dopo aver fatto corrispondere le connessioni e aver commutato i cavi di alimentazione, collegare l'apparecchio all'alimentazione della macchina. Se si hanno domande o se sorgono problemi che non sono stati trattati nel manuale relativi ai collegamenti dell'apparecchio, contattare l'autoconcessionario.

Voedingsaansluitschema

De hulpvoedingsaansluiting kan verschillen afhankelijk van de auto. Controleer het voedingsaansluitschema dat bij dit toestel wordt geleverd om te zien of de aansluitingen kloppen. Er zijn drie basistypes (zie illustratie hieronder). Het is mogelijk dat u de posities van de rode en gele kabels in het aansluitsnoer van het car audiosysteem moet omwisselen.
Als de aansluitingen en geschakelde voedingskabels kloppen, sluit u het toestel aan op de voeding van de auto. Indien u nog vragen of problemen hebt in verband met het aansluiten van het toestel die niet in deze handleiding vermeld staan, raadpleeg dan de autodealer.


Auxiliary power connector
Hilfsstromanschluss
Connecteur d'alimentation auxiliaire
Connettore di alimentazione ausiliaria
Hulpvoedingsaansluiting
7
5
3
1
8
6
4
2
a
Red
Rot
Rouge
Rosso
Rood
Yellow
Gelb
Jaune
Giallo
Geel
b
c
the car without ACC position
Fahrzeug ohne Zubehörposition (ACC)
Voiture sans position ACC
macchina priva di posizione ACC
auto zonder ACC stand

a

4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding	7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding

b

4	Yellow Gelb Jaune Giallo Geel	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding	7	Red Rot Rouge Rosso Rood	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding

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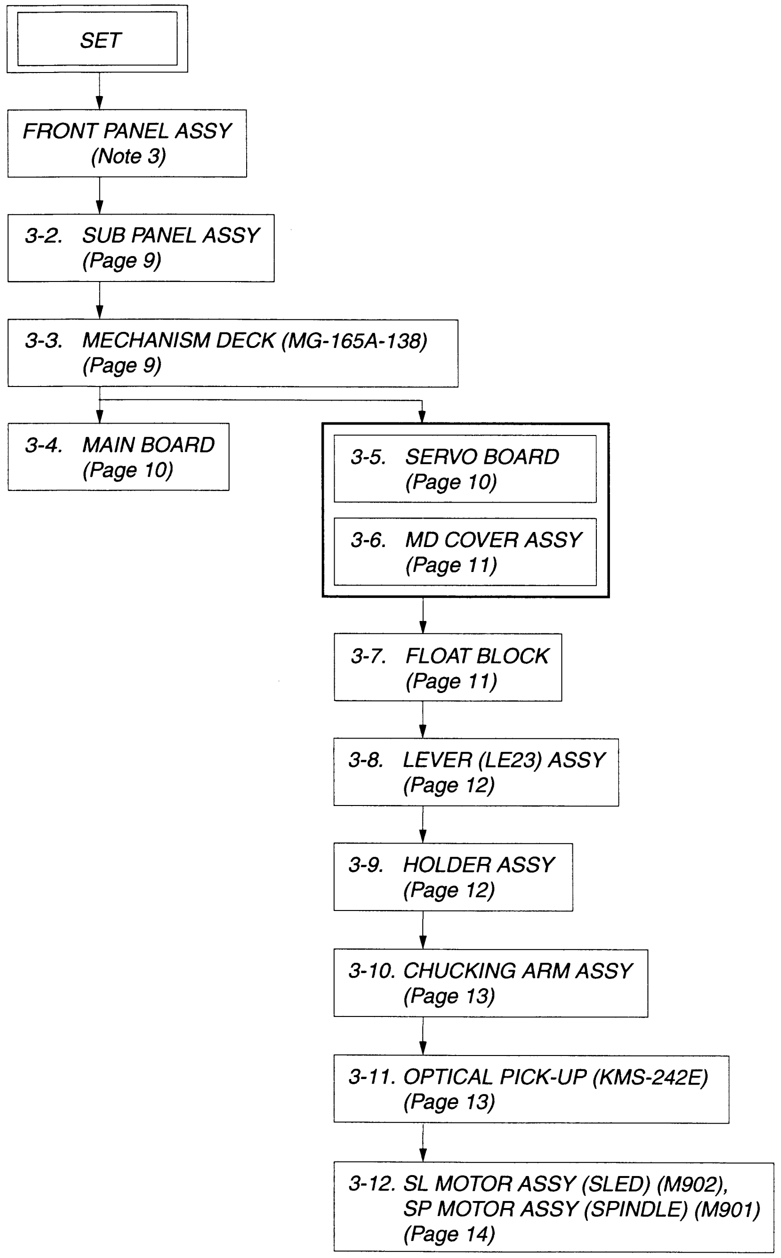
SECTION 3
DISASSEMBLY

- This set can be disassembled in the order shown below.

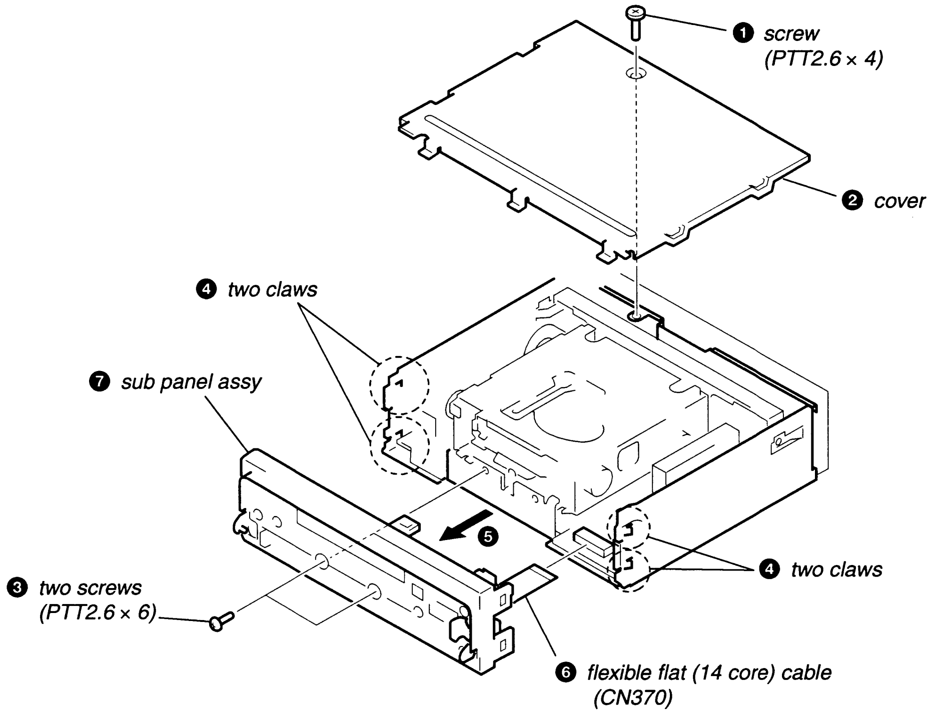
3-1. DISASSEMBLY FLOW

Note 1: *The process described in* ▤ *can be performed in any order.*
Note 2: *Without completing the process described in* ▤*, the next process can not be performed.*
Note 3: *Illustration of disassembly is omitted.*

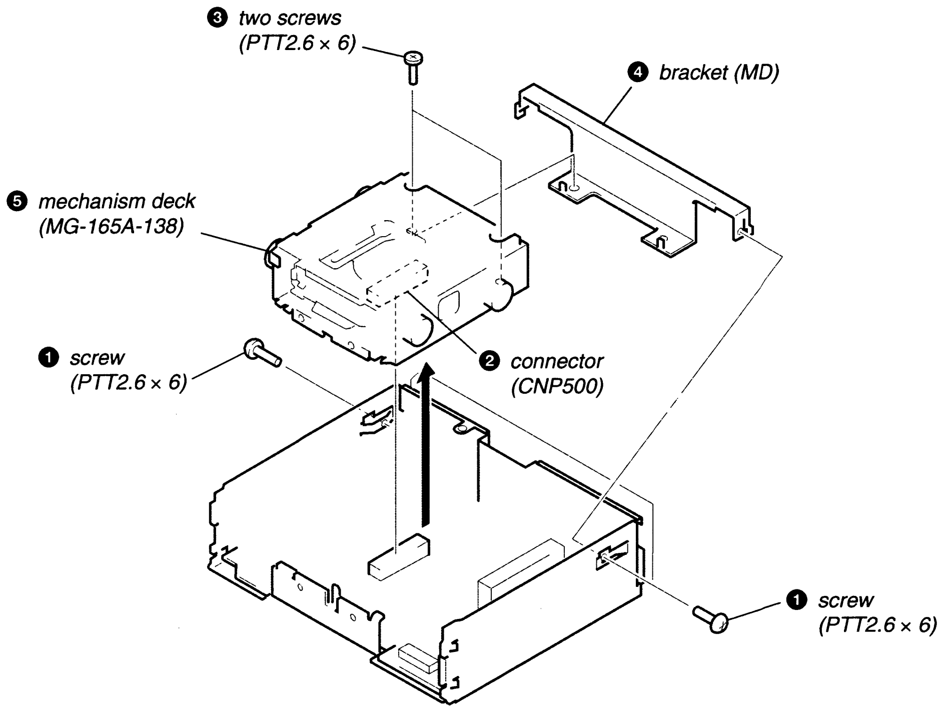

SET
FRONT PANEL ASSY (Note 3)
3-2. SUB PANEL ASSY (Page 9)
3-3. MECHANISM DECK (MG-165A-138) (Page 9)
3-4. MAIN BOARD (Page 10)
3-5. SERVO BOARD (Page 10)
3-6. MD COVER ASSY (Page 11)
3-7. FLOAT BLOCK (Page 11)
3-8. LEVER (LE23) ASSY (Page 12)
3-9. HOLDER ASSY (Page 12)
3-10. CHUCKING ARM ASSY (Page 13)
3-11. OPTICAL PICK-UP (KMS-242E) (Page 13)
3-12. SL MOTOR ASSY (SLED) (M902), SP MOTOR ASSY (SPINDLE) (M901) (Page 14)

Note: Follow the disassembly procedure in the numerical order given.

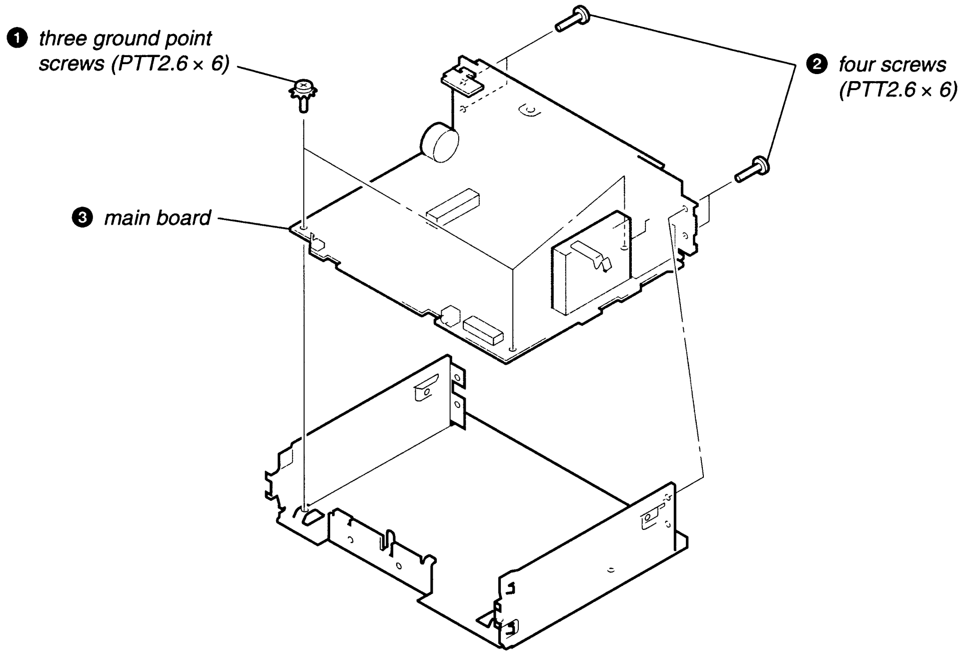
3-2. SUB PANEL ASSY


❶ screw (PTT2.6 × 4)
❷ cover
❹ two claws
❼ sub panel assy
❺
❹ two claws
❸ two screws (PTT2.6 × 6)
❻ flexible flat (14 core) cable (CN370)

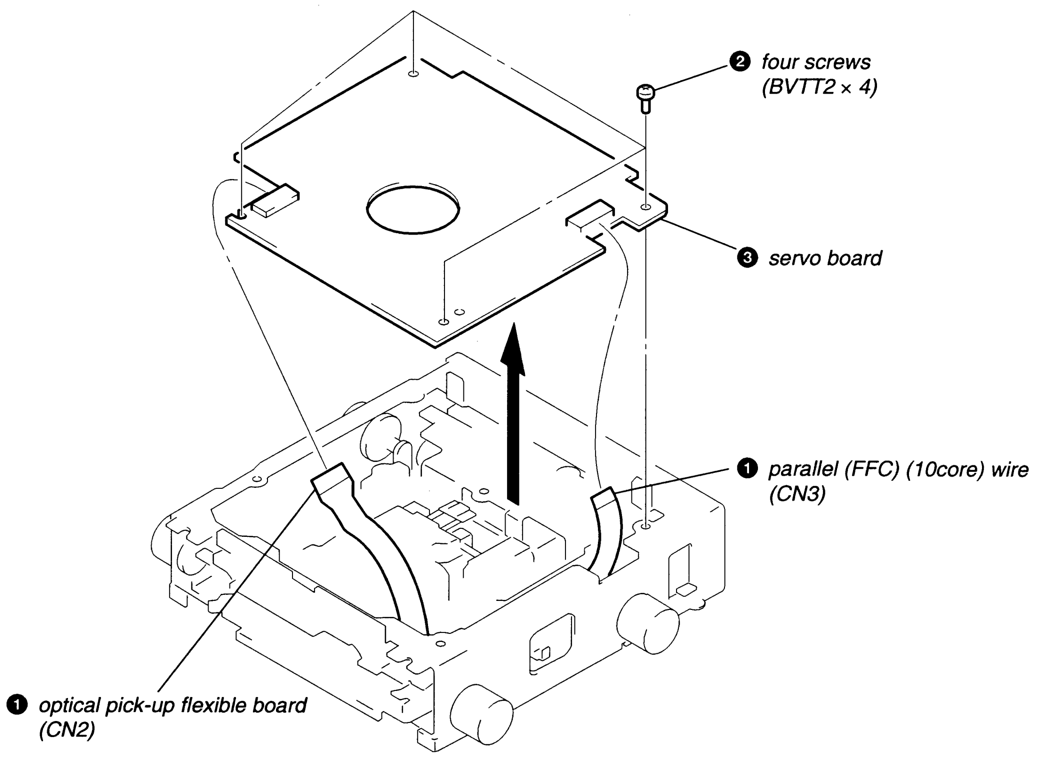
3-3. MECHANISM DECK (MG-165A-138)


❸ two screws (PTT2.6 × 6)
❹ bracket (MD)
❺ mechanism deck (MG-165A-138)
❶ screw (PTT2.6 × 6)
❷ connector (CNP500)
❶ screw (PTT2.6 × 6)

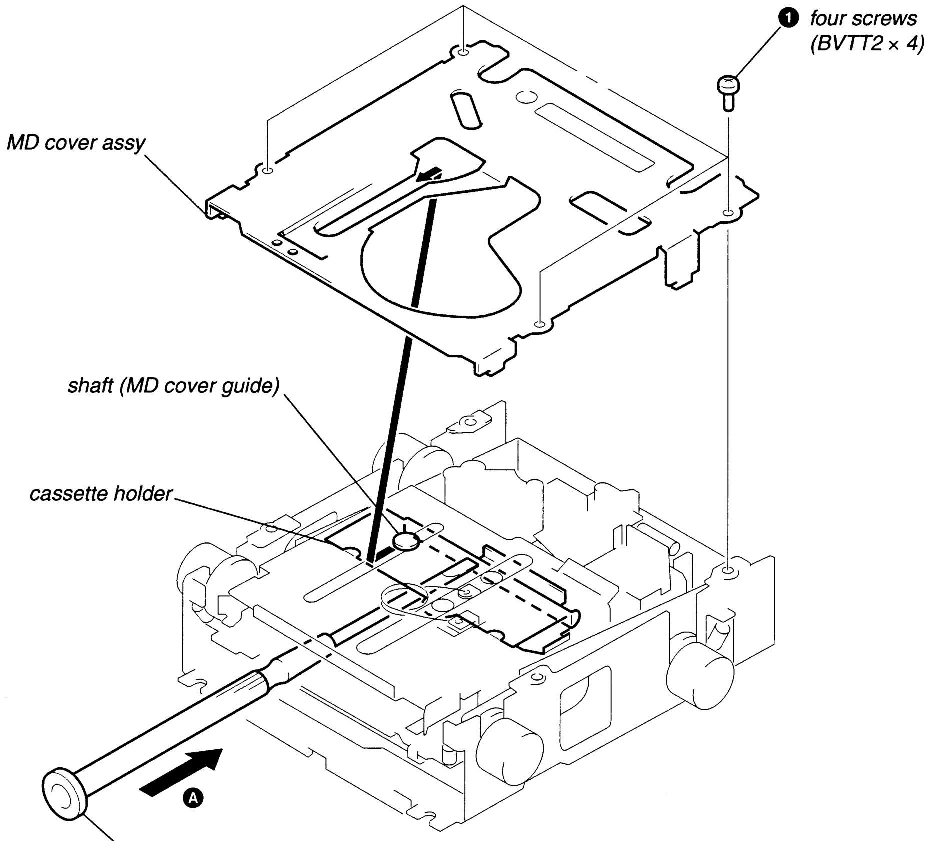
3-4. MAIN BOARD


❶ three ground point screws (PTT2.6 × 6)
❷ four screws (PTT2.6 × 6)
❸ main board

3-5. SERVO BOARD


❷ four screws (BVTT2 × 4)
❸ servo board
❶ parallel (FFC) (10core) wire (CN3)
❶ optical pick-up flexible board (CN2)

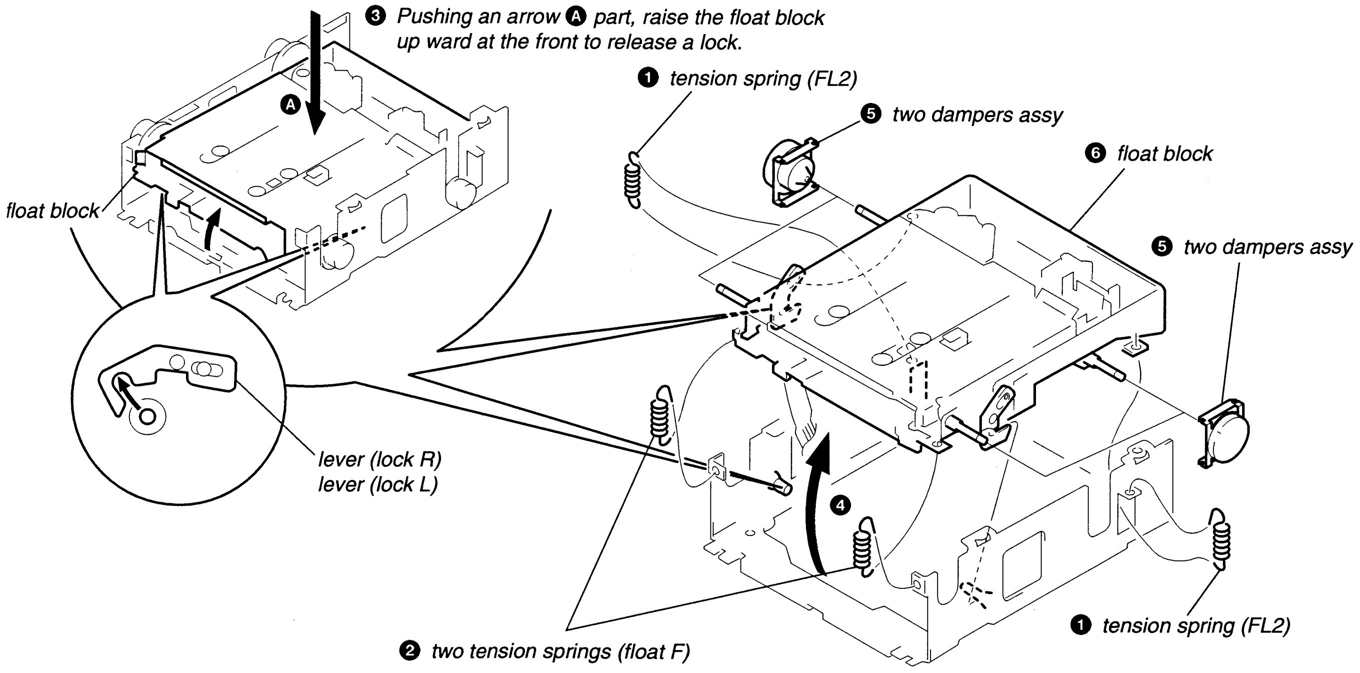
3-6. MD COVER ASSY


❶ four screws (BVTT2 × 4)
❸ MD cover assy
shaft (MD cover guide)
cassette holder
Ⓐ

❷ Pushing the cassette holder in the direction of the arrow Ⓐ with a screwdriver, etc., disengage the shaft (MD cover guide) from the slot in the MD cover assy.

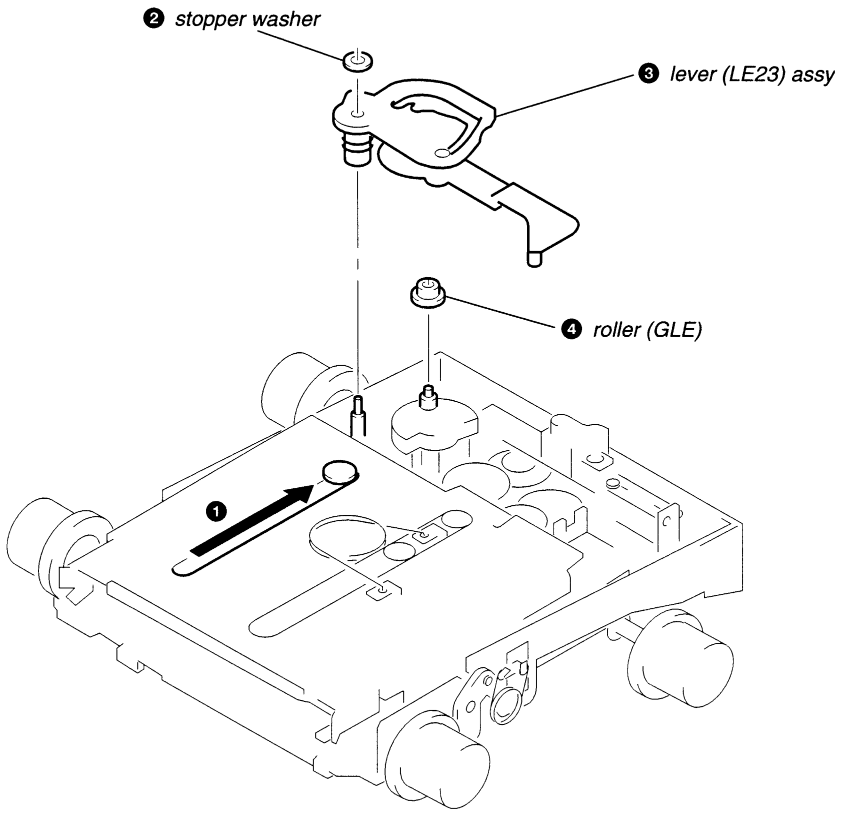
Note: Take care not to scratch the optiocal pick-up when pushing the cassette holder with a screwdriver. etc.

3-7. FLOAT BLOCK


Ⓐ
float block
lever (lock R)
lever (lock L)
❶ tension spring (FL2)
❺ two dampers assy
❻ float block
❺ two dampers assy
❹
❶ tension spring (FL2)
❷ two tension springs (float F)

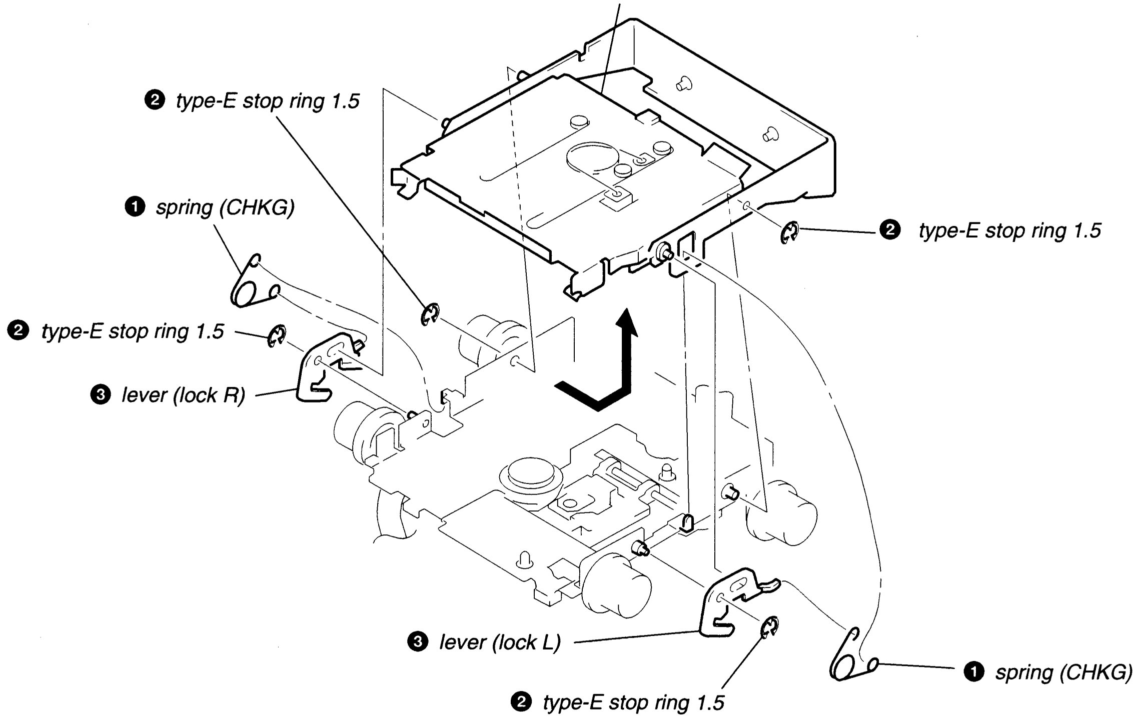
❸ Pushing an arrow Ⓐ part, raise the float block up ward at the front to release a lock.

3-8. LEVER (LE23) ASSY

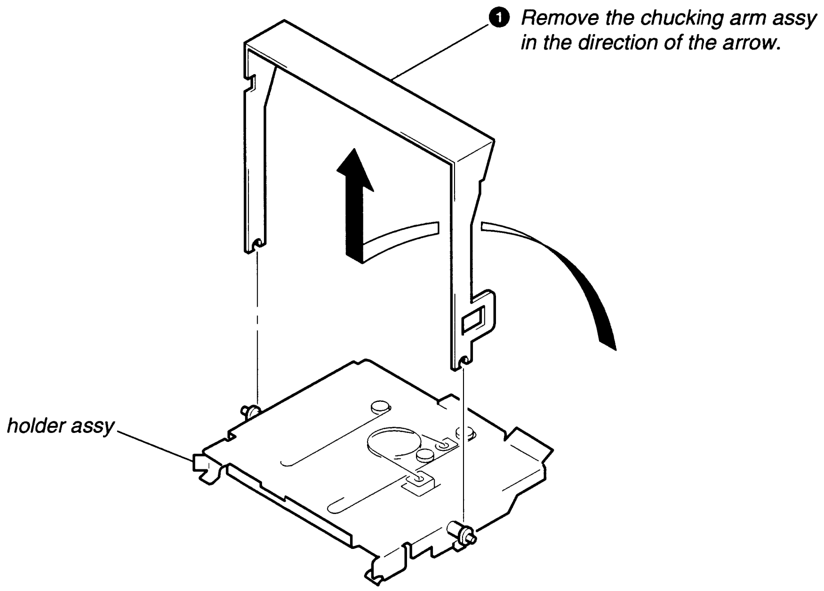

❷ stopper washer
❸ lever (LE23) assy
❹ roller (GLE)
❶

3-9. HOLDER ASSY

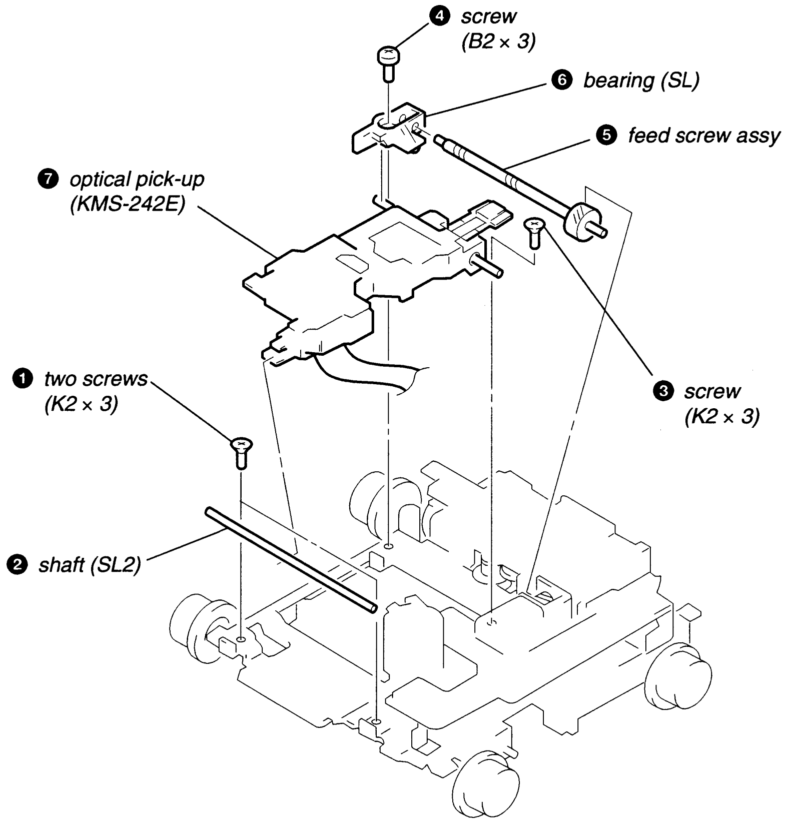
❹ Remove the holder assy in the direction of the arrow.


❷ type-E stop ring 1.5
❶ spring (CHKG)
❷ type-E stop ring 1.5
❸ lever (lock R)
❷ type-E stop ring 1.5
❸ lever (lock L)
❷ type-E stop ring 1.5
❶ spring (CHKG)

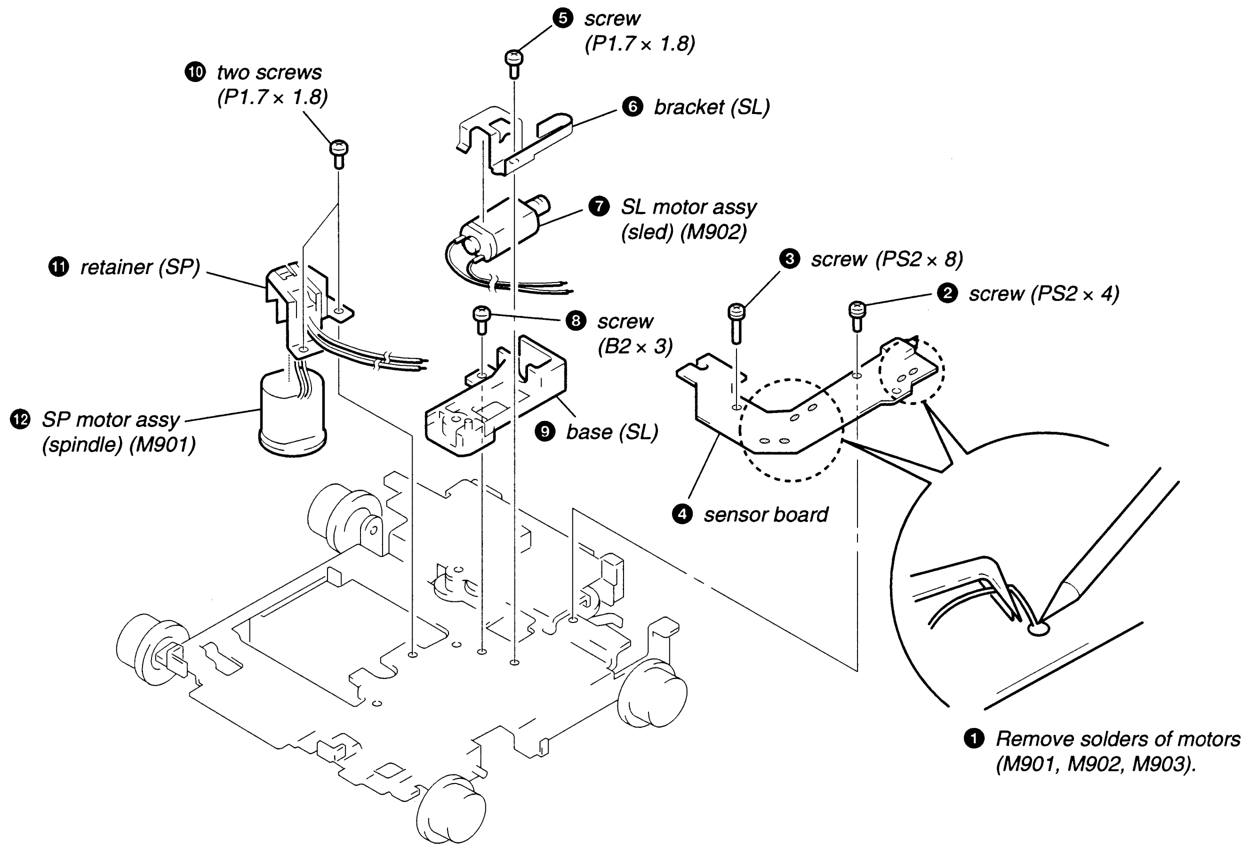
3-10. CHUCKING ARM ASSY


❶ Remove the chucking arm assy in the direction of the arrow.
holder assy

3-11. OPTICAL PICK-UP (KMS-242E)


❹ screw (B2 × 3)
❻ bearing (SL)
❺ feed screw assy
❼ optical pick-up (KMS-242E)
❶ two screws (K2 × 3)
❸ screw (K2 × 3)
❷ shaft (SL2)

3-12. SL MOTOR ASSY (SLED) (M902), SP MOTOR ASSY (SPINDLE) (M901)


❺ screw (P1.7 × 1.8)
❿ two screws (P1.7 × 1.8)
❻ bracket (SL)
❼ SL motor assy (sled) (M902)
⓫ retainer (SP)
❸ screw (PS2 × 8)
❷ screw (PS2 × 4)
❽ screw (B2 × 3)
⓬ SP motor assy (spindle) (M901)
❾ base (SL)
❹ sensor board
❶ Remove solders of motors (M901, M902, M903).

SECTION 4
ELECTRICAL ADJUSTMENTS

TEST MODE
This set have the test mode function.

<Set the Test Mode>

1. Turn ON the regulated power supply. (The clock is displayed)
   Note: Press the OFF button, if the clock is not displayed.
2. Push the preset 4 button.
3. Push the preset 5 button.
4. Press the preset 1 button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the OFF button.

MD SECTION

MD section adjustments are done automatically in this set.

TUNER SECTION

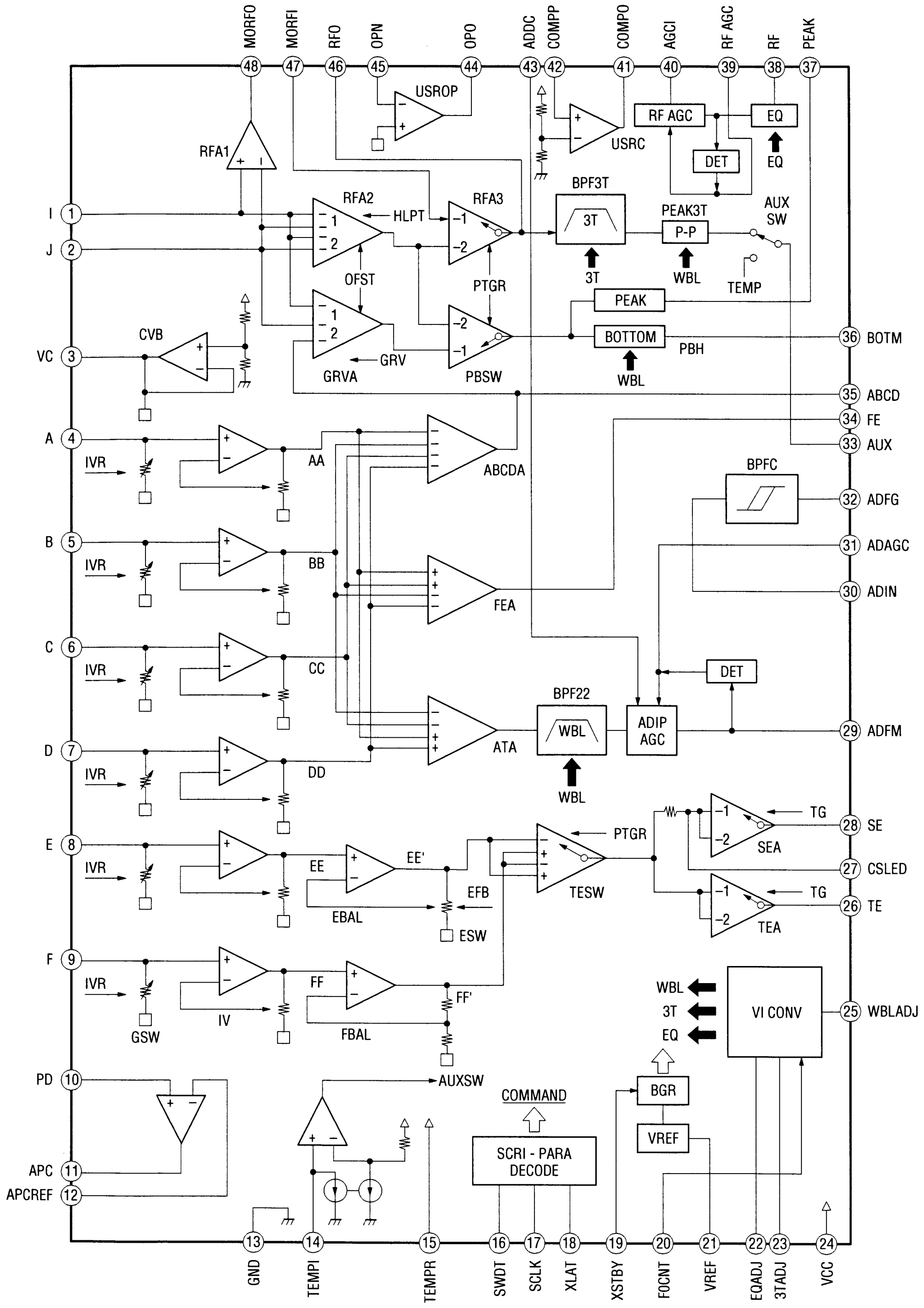
Tuner section adjustments are done automatically in this set.

SECTION 5
DIAGRAMS

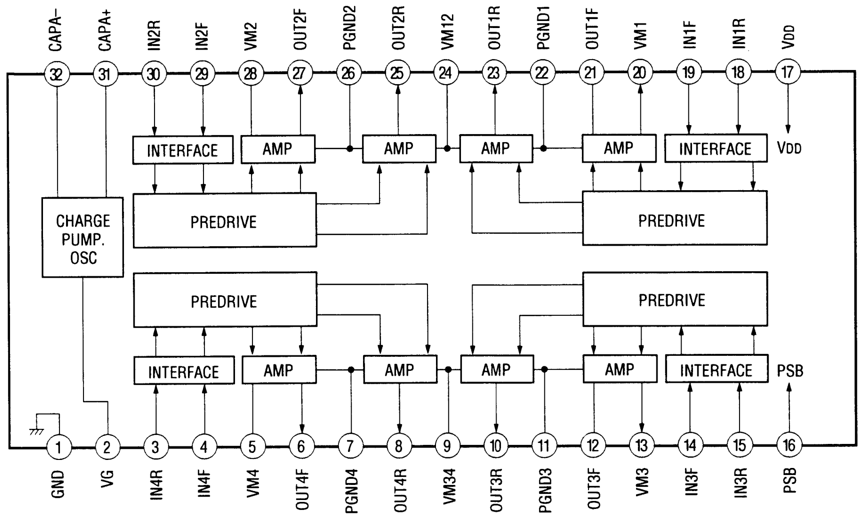
- **IC Block Diagrams**

– SERVO Board –

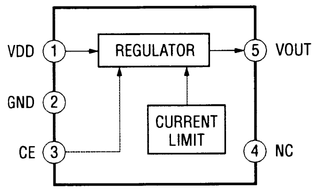
IC1 CXA2523AR


MORFO
MORFI
RFO
OPN
OPO
ADDC
COMPP
COMPO
AGCI
RF AGC
RF
PEAK
48
47
46
45
44
43
42
41
40
39
38
37
USROP
RFA1
RF AGC
EQ
DET
EQ
USRC
BPF3T
RFA2
HLPT
RFA3
3T
PEAK3T
P-P
AUX SW
3T
WBL
TEMP
OFST
PTGR
PEAK
BOTTOM
PBH
WBL
CVB
GRV
GRVA
PBSW
I 1
J 2
VC 3
A 4
B 5
C 6
D 7
E 8
F 9
PD 10
APC 11
APCREF 12
IVR
AA
BB
CC
DD
EE
EE'
FF
FF'
ABCDA
FEA
ATA
BPFC
BPF22
WBL
ADIP AGC
DET
EBAL
EFB
ESW
FBAL
GSW
IV
TESW
PTGR
SEA
TEA
TG
AUXSW
COMMAND
SCRI - PARA DECODE
BGR
VREF
VI CONV
WBL
3T
EQ
36 BOTM
35 ABCD
34 FE
33 AUX
32 ADFG
31 ADAGC
30 ADIN
29 ADFM
28 SE
27 CSLED
26 TE
25 WBLADJ
13 GND
14 TEMPI
15 TEMPR
16 SWDT
17 SCLK
18 XLAT
19 XSTBY
20 FOCNT
21 VREF
22 EQADJ
23 3TADJ
24 VCC

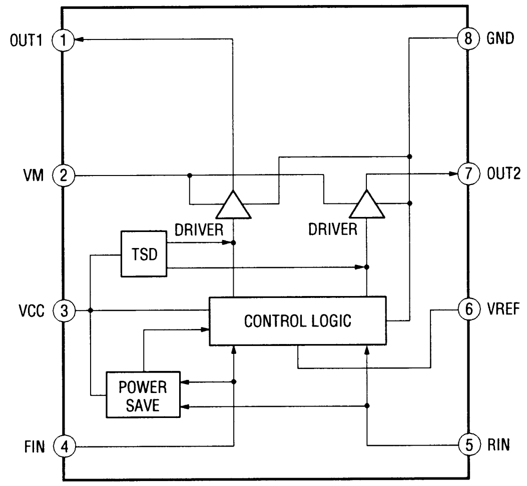
IC2 BH6519FS-E2


CAPA– 32
CAPA+ 31
IN2R 30
IN2F 29
VM2 28
OUT2F 27
PGND2 26
OUT2R 25
VM12 24
OUT1R 23
PGND1 22
OUT1F 21
VM1 20
IN1F 19
IN1R 18
VDD 17
INTERFACE
AMP
AMP
AMP
AMP
INTERFACE
VDD
CHARGE PUMP. OSC
PREDRIVE
PREDRIVE
PREDRIVE
PREDRIVE
INTERFACE
AMP
AMP
AMP
AMP
INTERFACE
PSB
GND 1
VG 2
IN4R 3
IN4F 4
VM4 5
OUT4F 6
PGND4 7
OUT4R 8
VM34 9
OUT3R 10
PGND3 11
OUT3F 12
VM3 13
IN3F 14
IN3R 15
PSB 16

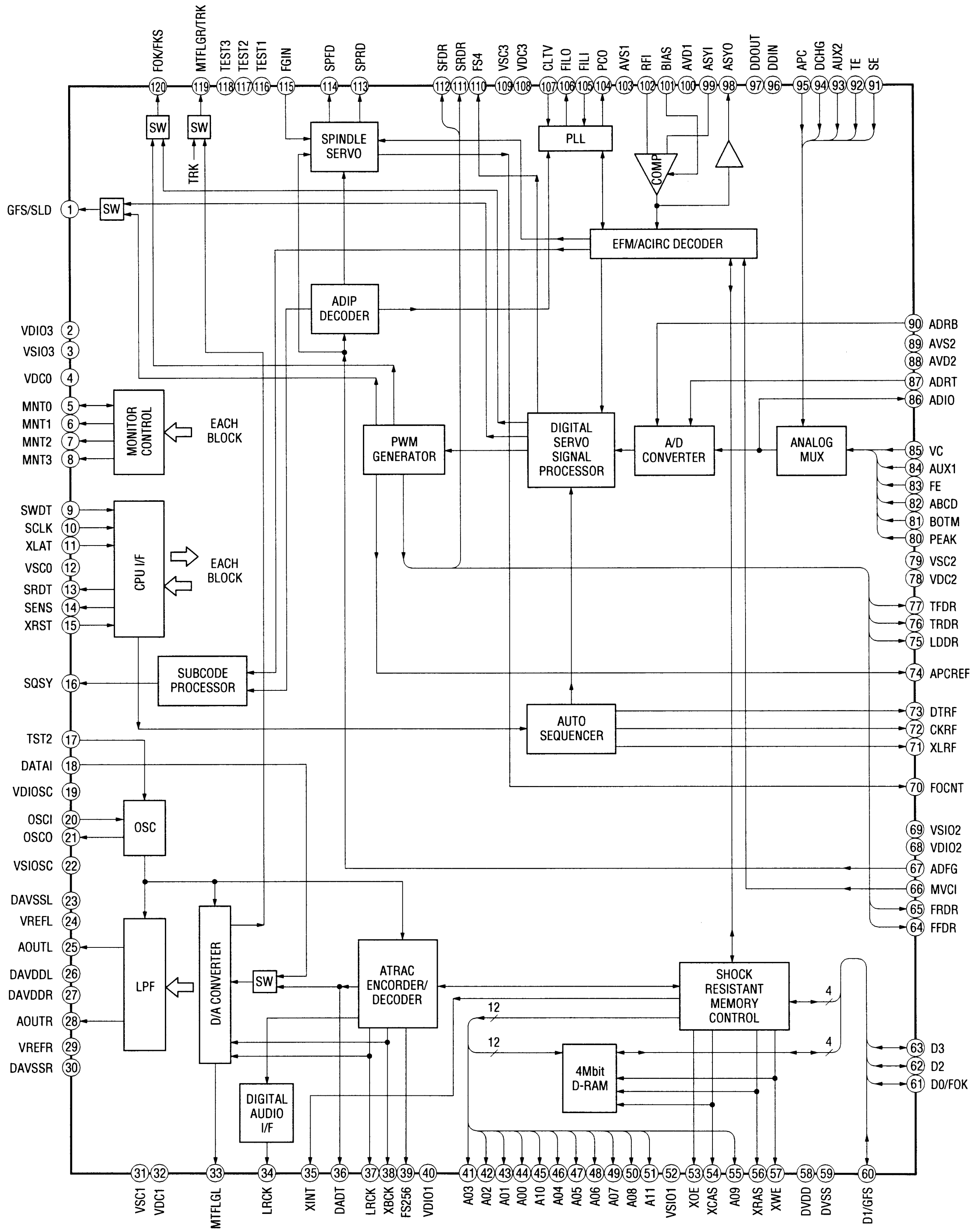
IC3 R1114N251D-TR-FA


VDD 1
GND 2
CE 3
REGULATOR
CURRENT LIMIT
5 VOUT
4 NC

IC6 BA6287F

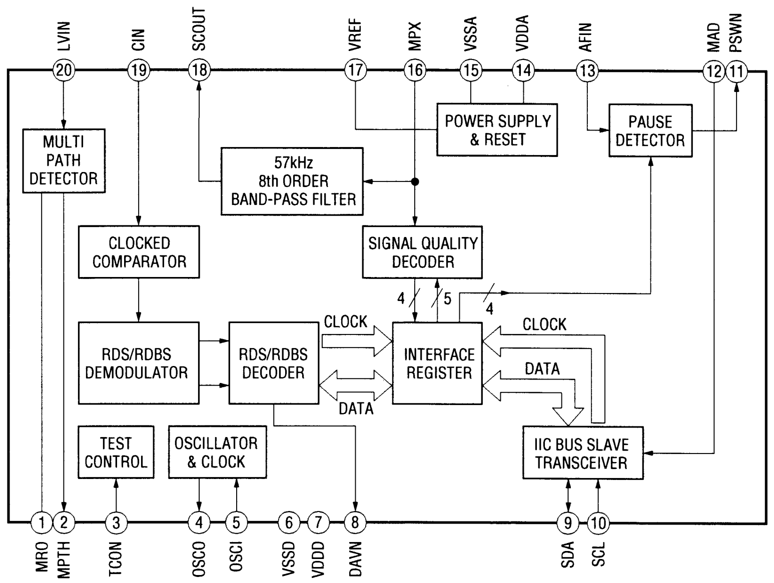

OUT1 1
VM 2
VCC 3
FIN 4
8 GND
7 OUT2
6 VREF
5 RIN
DRIVER
DRIVER
TSD
CONTROL LOGIC
POWER SAVE

IC4 CXD2667R

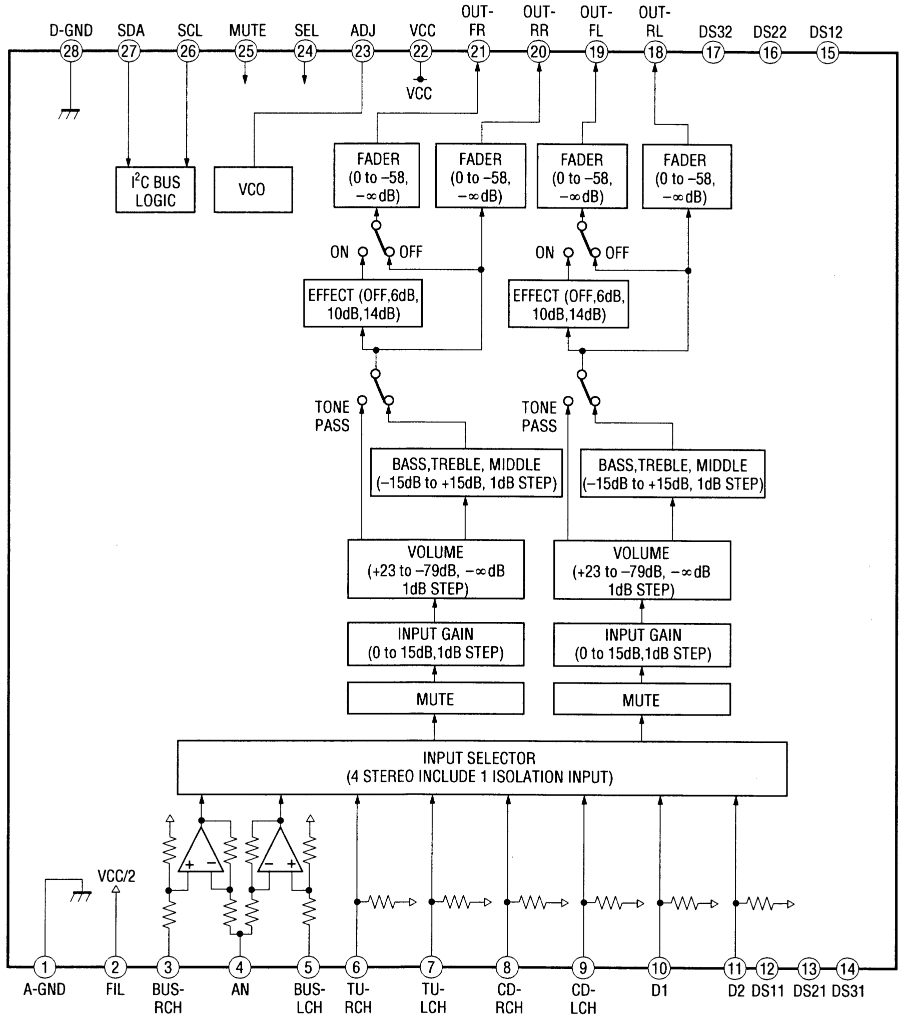

FOK/FKS 120
MTFLGR/TRK 119
TEST3 118
TEST2 117
TEST1 116
FGIN 115
SPFD 114
SPRD 113
SFDR 112
SRDR 111
FS4 110
VSC3 109
VDC3 108
CLTV 107
FILO 106
FILI 105
PCO 104
AVS1 103
RFI 102
BIAS 101
AVD1 100
ASYI 99
ASYO 98
DDOUT 97
DDIN 96
APC 95
DCHG 94
AUX2 93
TE 92
SE 91
SW
SW
TRK
SPINDLE SERVO
PLL
COMP
EFM/ACIRC DECODER
GFS/SLD 1
SW
ADIP DECODER
VDIO3 2
VSIO3 3
VDCO 4
MNT0 5
MNT1 6
MNT2 7
MNT3 8
MONITOR CONTROL
EACH BLOCK
PWM GENERATOR
DIGITAL SERVO SIGNAL PROCESSOR
A/D CONVERTER
ANALOG MUX
SWDT 9
SCLK 10
XLAT 11
VSCO 12
SRDT 13
SENS 14
XRST 15
CPU I/F
EACH BLOCK
SQSY 16
SUBCODE PROCESSOR
AUTO SEQUENCER
TST2 17
DATAI 18
VDIOSC 19
OSCI 20
OSCO 21
VSIOSC 22
OSC
DAVSSL 23
VREFL 24
AOUTL 25
DAVDDL 26
DAVDDR 27
AOUTR 28
VREFR 29
DAVSSR 30
LPF
D/A CONVERTER
SW
ATRAC ENCORDER/ DECODER
DIGITAL AUDIO I/F
SHOCK RESISTANT MEMORY CONTROL
4MbIt D-RAM
12
12
4
4
90 ADRB
89 AVS2
88 AVD2
87 ADRT
86 ADIO
85 VC
84 AUX1
83 FE
82 ABCD
81 BOTM
80 PEAK
79 VSC2
78 VDC2
77 TFDR
76 TRDR
75 LDDR
74 APCREF
73 DTRF
72 CKRF
71 XLRF
70 FOCNT
69 VSIO2
68 VDIO2
67 ADFG
66 MVCI
65 FRDR
64 FFDR
63 D3
62 D2
61 D0/FOK
VSC1 31
VDC1 32
MTFLGL 33
LRCK 34
XINT 35
DADT 36
LRCK 37
XBCK 38
FS256 39
VDIO1 40
A03 41
A02 42
A01 43
A00 44
A10 45
A04 46
A05 47
A06 48
A07 49
A08 50
A11 51
VSIO1 52
XOE 53
XCAS 54
A09 55
XRAS 56
XWE 57
DVDD 58
DVSS 59
D1/GFS 60

– MAIN Board –

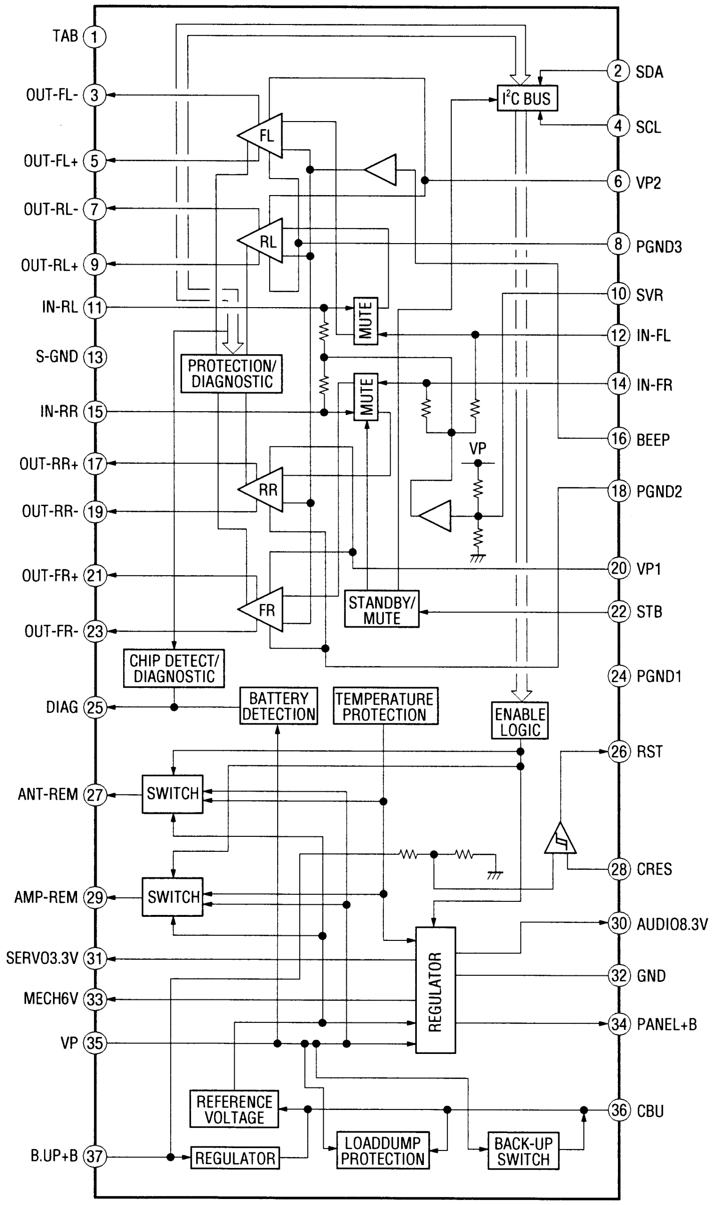
IC90 SAA6588T/V2-518


LVIN
CIN
SCOUT
VREF
MPX
VSSA
VDDA
AFIN
MAD
PSWN
20
19
18
17
16
15
14
13
12
11
MULTI PATH DETECTOR
57kHz 8th ORDER BAND-PASS FILTER
POWER SUPPLY & RESET
PAUSE DETECTOR
CLOCKED COMPARATOR
SIGNAL QUALITY DECODER
4
5
4
RDS/RDBS DEMODULATOR
RDS/RDBS DECODER
CLOCK
DATA
INTERFACE REGISTER
CLOCK
DATA
TEST CONTROL
OSCILLATOR & CLOCK
IIC BUS SLAVE TRANSCEIVER
1
2
3
4
5
6
7
8
9
10
MRO
MPTH
TCON
OSCO
OSCI
VSSD
VDDD
DAVN
SDA
SCL

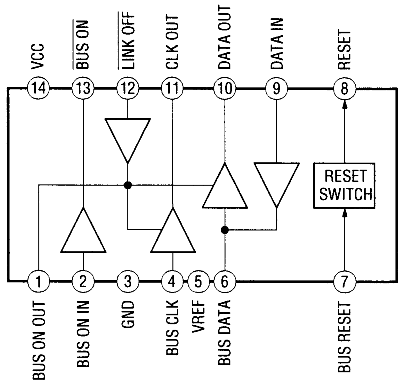
IC120 BD3802F-FE2


D-GND
SDA
SCL
MUTE
SEL
ADJ
VCC
OUT-FR
OUT-RR
OUT-FL
OUT-RL
DS32
DS22
DS12
28
27
26
25
24
23
22
21
20
19
18
17
16
15
VCC
I²C BUS LOGIC
VCO
FADER (0 to –58, –∞dB)
FADER (0 to –58, –∞dB)
FADER (0 to –58, –∞dB)
FADER (0 to –58, –∞dB)
ON
OFF
ON
OFF
EFFECT (OFF,6dB, 10dB,14dB)
EFFECT (OFF,6dB, 10dB,14dB)
TONE
PASS
TONE
PASS
BASS,TREBLE, MIDDLE (–15dB to +15dB, 1dB STEP)
BASS,TREBLE, MIDDLE (–15dB to +15dB, 1dB STEP)
VOLUME (+23 to –79dB, –∞dB 1dB STEP)
VOLUME (+23 to –79dB, –∞dB 1dB STEP)
INPUT GAIN (0 to 15dB,1dB STEP)
INPUT GAIN (0 to 15dB,1dB STEP)
MUTE
MUTE
INPUT SELECTOR (4 STEREO INCLUDE 1 ISOLATION INPUT)
VCC/2
+
–
+
–
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A-GND
FIL
BUS-RCH
AN
BUS-LCH
TU-RCH
TU-LCH
CD-RCH
CD-LCH
D1
D2
DS11
DS21
DS31

IC300 TDA8588AJ/N1


TAB 1
OUT-FL- 3
OUT-FL+ 5
OUT-RL- 7
OUT-RL+ 9
IN-RL 11
S-GND 13
IN-RR 15
OUT-RR+ 17
OUT-RR- 19
OUT-FR+ 21
OUT-FR- 23
DIAG 25
ANT-REM 27
AMP-REM 29
SERVO3.3V 31
MECH6V 33
VP 35
B.UP+B 37
2 SDA
4 SCL
6 VP2
8 PGND3
10 SVR
12 IN-FL
14 IN-FR
16 BEEP
18 PGND2
20 VP1
22 STB
24 PGND1
26 RST
28 CRES
30 AUDIO8.3V
32 GND
34 PANEL+B
36 CBU
I²C BUS
FL
RL
RR
FR
MUTE
MUTE
VP
PROTECTION/ DIAGNOSTIC
STANDBY/ MUTE
CHIP DETECT/ DIAGNOSTIC
BATTERY DETECTION
TEMPERATURE PROTECTION
ENABLE LOGIC
SWITCH
SWITCH
REGULATOR
REFERENCE VOLTAGE
REGULATOR
LOADDUMP PROTECTION
BACK-UP SWITCH

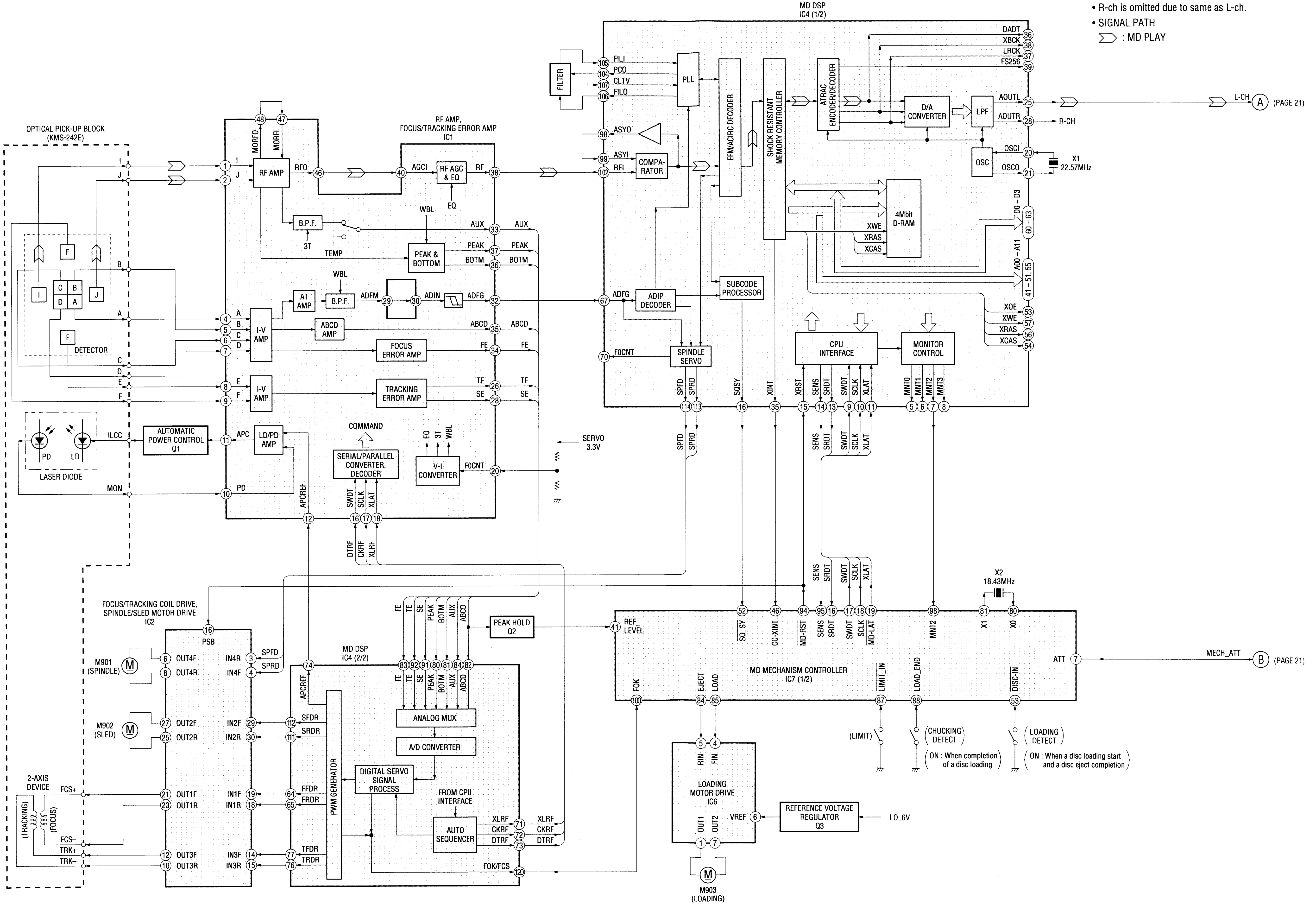
IC400 BA8271F-E2


VCC
BUS ON
LINK OFF
CLK OUT
DATA OUT
DATA IN
RESET
14
13
12
11
10
9
8
RESET SWITCH
1
2
3
4
5
6
7
BUS ON OUT
BUS ON IN
GND
BUS CLK
VREF
BUS DATA
BUS RESET

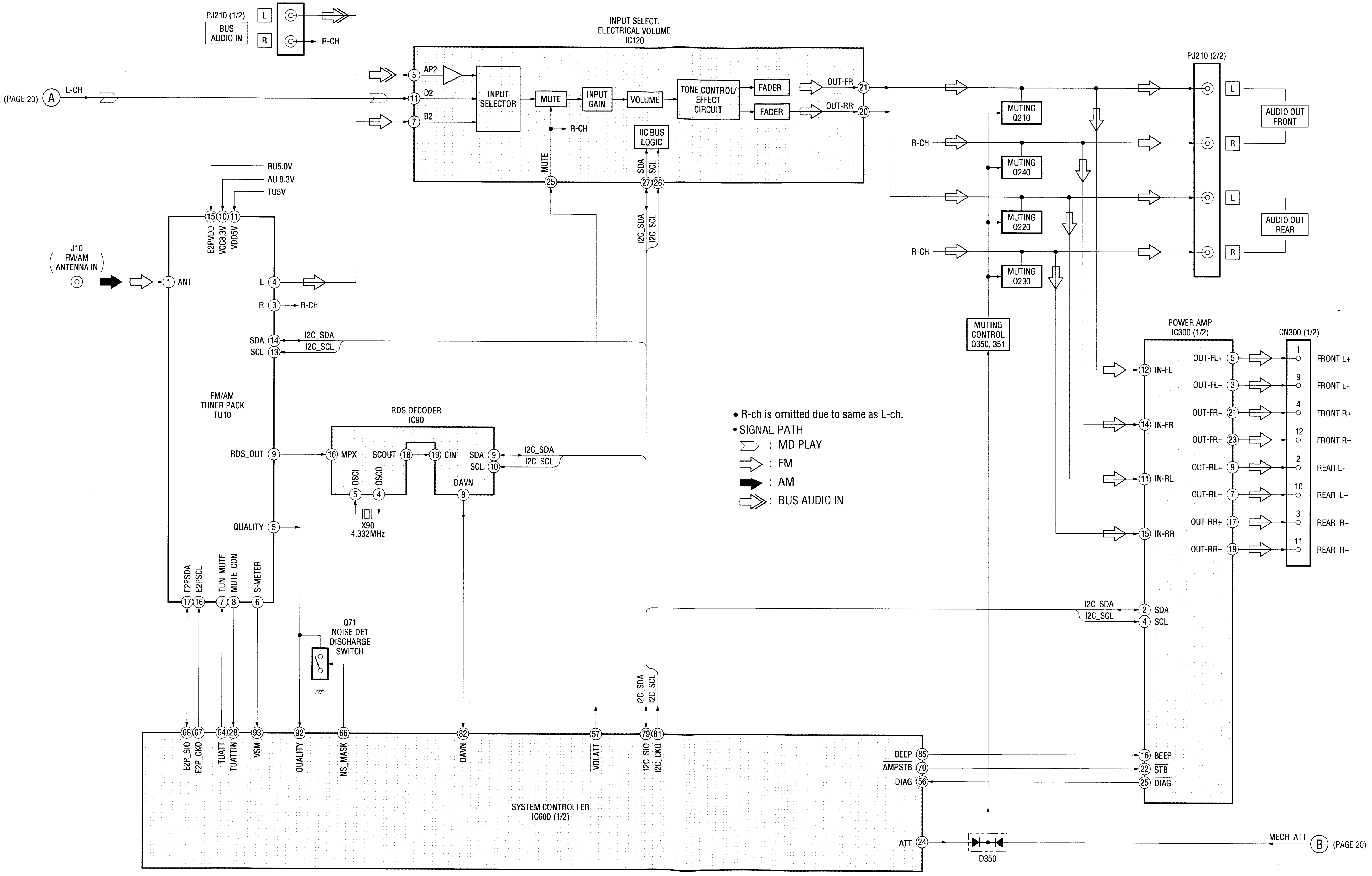
5-1. BLOCK DIAGRAM – SERVO Section –

- R-ch is omitted due to same as L-ch.
- SIGNAL PATH

⊳ : MD PLAY


OPTICAL PICK-UP BLOCK (KMS-242E)
DETECTOR
I
J
F
E
A
B
C
D
LASER DIODE
PD
LD
ILCC
MON
AUTOMATIC POWER CONTROL Q1
RF AMP, FOCUS/TRACKING ERROR AMP IC1
MORFO
MORFI
RF AMP
RFO
AGCI
RF AGC & EQ
RF
EQ
WBL
B.P.F.
3T
TEMP
AUX
PEAK & BOTTOM
PEAK
BOTM
AT AMP
ADFM
ADIN
ADFG
ABCD AMP
ABCD
I-V AMP
FOCUS ERROR AMP
FE
TRACKING ERROR AMP
TE
SE
APC
LD/PD AMP
PD
COMMAND
SERIAL/PARALLEL CONVERTER, DECODER
V-I CONVERTER
FOCNT
APCREF
SWDT
SCLK
XLAT
DTRF
CKRF
XLRF
SERVO 3.3V
MD DSP IC4 (1/2)
FILTER
FILI
PCO
CLTV
FILO
PLL
ASYO
ASYI
RFI
COMPA-RATOR
EFM/ACIRC DECODER
SHOCK RESISTANT MEMORY CONTROLLER
ATRAC ENCODER/DECODER
D/A CONVERTER
LPF
OSC
DADT
XBCK
LRCK
FS256
AOUTL
AOUTR
OSCI
OSCO
X1 22.57MHz
L-CH
R-CH
(A) (PAGE 21)
4Mbit D-RAM
XWE
XRAS
XCAS
D0 – D3
60 – 63
A00 – A11
41 – 51, 55
XOE
ADIP DECODER
SUBCODE PROCESSOR
SPINDLE SERVO
CPU INTERFACE
MONITOR CONTROL
SPFD
SPRD
SQSY
XINT
XRST
SENS
SRDT
MNT0
MNT1
MNT2
MNT3
FOCUS/TRACKING COIL DRIVE, SPINDLE/SLED MOTOR DRIVE IC2
PSB
M901 (SPINDLE)
M902 (SLED)
OUT4F
OUT4R
OUT2F
OUT2R
OUT1F
OUT1R
OUT3F
OUT3R
IN4R
IN4F
IN2F
IN2R
IN1F
IN1R
IN3F
IN3R
2-AXIS DEVICE
(TRACKING)
(FOCUS)
FCS+
FCS–
TRK+
TRK–
MD DSP IC4 (2/2)
PWM GENERATOR
SFDR
SRDR
FFDR
FRDR
TFDR
TRDR
ANALOG MUX
A/D CONVERTER
DIGITAL SERVO SIGNAL PROCESS
FROM CPU INTERFACE
AUTO SEQUENCER
FOK/FCS
PEAK HOLD Q2
MD MECHANISM CONTROLLER IC7 (1/2)
REF_ LEVEL
SQ_SY
CC-XINT
MD-RST
MD-LAT
X2 18.43MHz
X1
X0
ATT
MECH_ATT
(B) (PAGE 21)
FOK
EJECT
LOAD
LIMIT_IN
LOAD_END
DISC-IN
(LIMIT)
(CHUCKING DETECT)
(ON : When completion of a disc loading)
(LOADING DETECT)
(ON : When a disc loading start and a disc eject completion)
RIN
FIN
LOADING MOTOR DRIVE IC6
OUT1
OUT2
VREF
REFERENCE VOLTAGE REGULATOR Q3
LO_6V
M903 (LOADING)

5-2. BLOCK DIAGRAM – MAIN Section –


PJ210 (1/2)
BUS AUDIO IN
L
R
R-CH
INPUT SELECT, ELECTRICAL VOLUME IC120
AP2
D2
B2
INPUT SELECTOR
MUTE
INPUT GAIN
VOLUME
TONE CONTROL/ EFFECT CIRCUIT
FADER
FADER
OUT-FR
OUT-RR
IIC BUS LOGIC
MUTE
SDA
SCL
(PAGE 20) A
L-CH
BU5.0V
AU 8.3V
TU5V
E2PVDD
VCC8.3V
VDD5V
J10 FM/AM ANTENNA IN
ANT
I2C_SDA
I2C_SCL
SDA
SCL
FM/AM TUNER PACK TU10
RDS_OUT
RDS DECODER IC90
MPX
SCOUT
CIN
OSCI
OSCO
DAVN
X90 4.332MHz
QUALITY
E2PSDA
E2PSCL
TUN_MUTE
MUTE_CON
S-METER
Q71 NOISE DET DISCHARGE SWITCH
SYSTEM CONTROLLER IC600 (1/2)
E2P_SIO
E2P_CKO
TUATT
TUATTIN
VSM
NS_MASK
VOLATT
I2C_SIO
I2C_CKO
BEEP
AMPSTB
DIAG
ATT
D350
MECH_ATT
B (PAGE 20)
PJ210 (2/2)
AUDIO OUT FRONT
AUDIO OUT REAR
MUTING Q210
MUTING Q240
MUTING Q220
MUTING Q230
MUTING CONTROL Q350, 351
POWER AMP IC300 (1/2)
IN-FL
IN-FR
IN-RL
IN-RR
OUT-FL+
OUT-FL–
OUT-FR+
OUT-FR–
OUT-RL+
OUT-RL–
OUT-RR+
OUT-RR–
STB
CN300 (1/2)
FRONT L+
FRONT L–
FRONT R+
FRONT R–
REAR L+
REAR L–
REAR R+
REAR R–

- R-ch is omitted due to same as L-ch.
- SIGNAL PATH

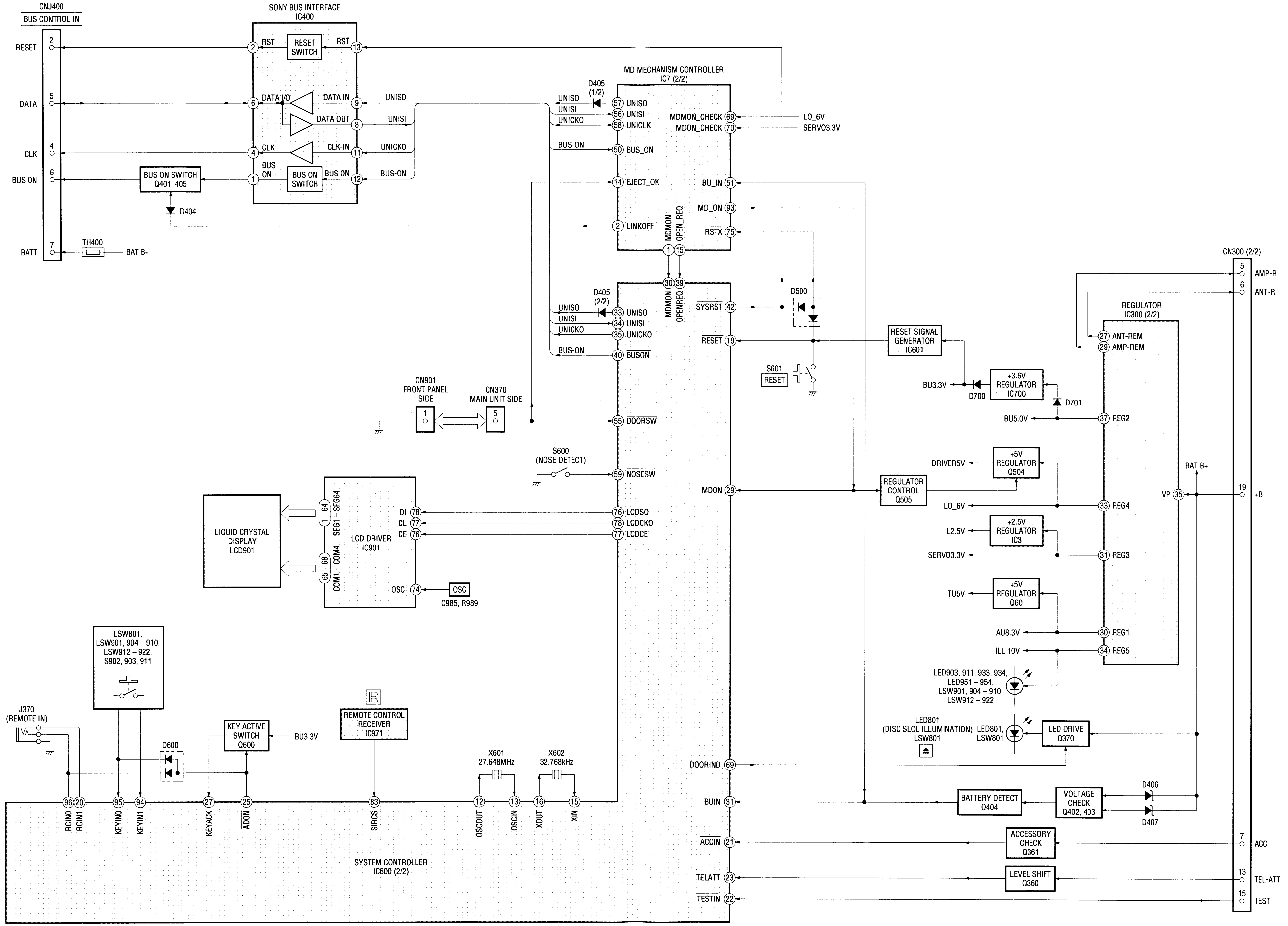
⊐ : MD PLAY

⇨ : FM

➡ : AM

⇛ : BUS AUDIO IN

5-3. BLOCK DIAGRAM – PANEL/BUS CONTROL/POWER SUPPLY Section –


CNJ400
BUS CONTROL IN
RESET
DATA
CLK
BUS ON
BATT
TH400
BAT B+
SONY BUS INTERFACE
IC400
RST
RESET SWITCH
DATA I/O
DATA IN
DATA OUT
CLK
CLK-IN
BUS ON
BUS ON SWITCH
BUS ON SWITCH
Q401, 405
D404
UNISO
UNISI
UNICKO
BUS-ON
MD MECHANISM CONTROLLER
IC7 (2/2)
D405 (1/2)
UNISO
UNISI
UNICLK
BUS_ON
EJECT_OK
LINKOFF
MDMON_CHECK
MDON_CHECK
LO_6V
SERVO3.3V
BU_IN
MD_ON
RSTX
MDMON
OPEN_REQ
D405 (2/2)
UNISO
UNISI
UNICKO
BUSON
SYSRST
RESET
D500
S601
RESET
CN901
FRONT PANEL SIDE
CN370
MAIN UNIT SIDE
DOORSW
S600
(NOSE DETECT)
NOSESW
LIQUID CRYSTAL DISPLAY
LCD901
SEG1 – SEG64
COM1 – COM4
LCD DRIVER
IC901
DI
CL
CE
OSC
OSC
C985, R989
LCDSO
LCDCKO
LCDCE
MDON
RESET SIGNAL GENERATOR
IC601
BU3.3V
D700
+3.6V REGULATOR
IC700
D701
BU5.0V
REGULATOR CONTROL
Q505
DRIVER5V
+5V REGULATOR
Q504
LO_6V
L2.5V
+2.5V REGULATOR
IC3
SERVO3.3V
TU5V
+5V REGULATOR
Q60
AU8.3V
ILL 10V
REGULATOR
IC300 (2/2)
ANT-REM
AMP-REM
REG2
REG4
REG3
REG1
REG5
VP
BAT B+
CN300 (2/2)
AMP-R
ANT-R
+B
ACC
TEL-ATT
TEST
LED903, 911, 933, 934,
LED951 – 954,
LSW901, 904 – 910,
LSW912 – 922
LED801
(DISC SLOL ILLUMINATION)
LED801, LSW801
LSW801
LED DRIVE
Q370
DOORIND
D406
D407
VOLTAGE CHECK
Q402, 403
BATTERY DETECT
Q404
BUIN
ACCESSORY CHECK
Q361
ACCIN
LEVEL SHIFT
Q360
TELATT
TESTIN
LSW801,
LSW901, 904 – 910,
LSW912 – 922,
S902, 903, 911
J370
(REMOTE IN)
D600
KEY ACTIVE SWITCH
Q600
BU3.3V
REMOTE CONTROL RECEIVER
IC971
X601
27.648MHz
X602
32.768kHz
RCIN0
RCIN1
KEYIN0
KEYIN1
KEYACK
ADON
SIRCS
OSCOUT
OSCIN
XOUT
XIN
SYSTEM CONTROLLER
IC600 (2/2)

5-4. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- o—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

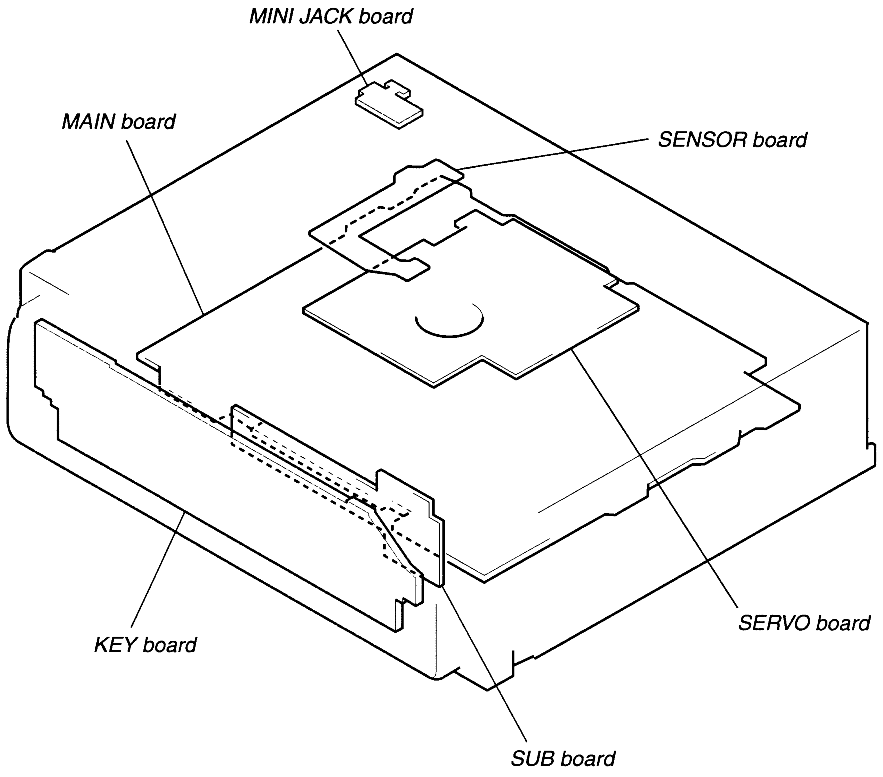
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ☐ : panel designation.

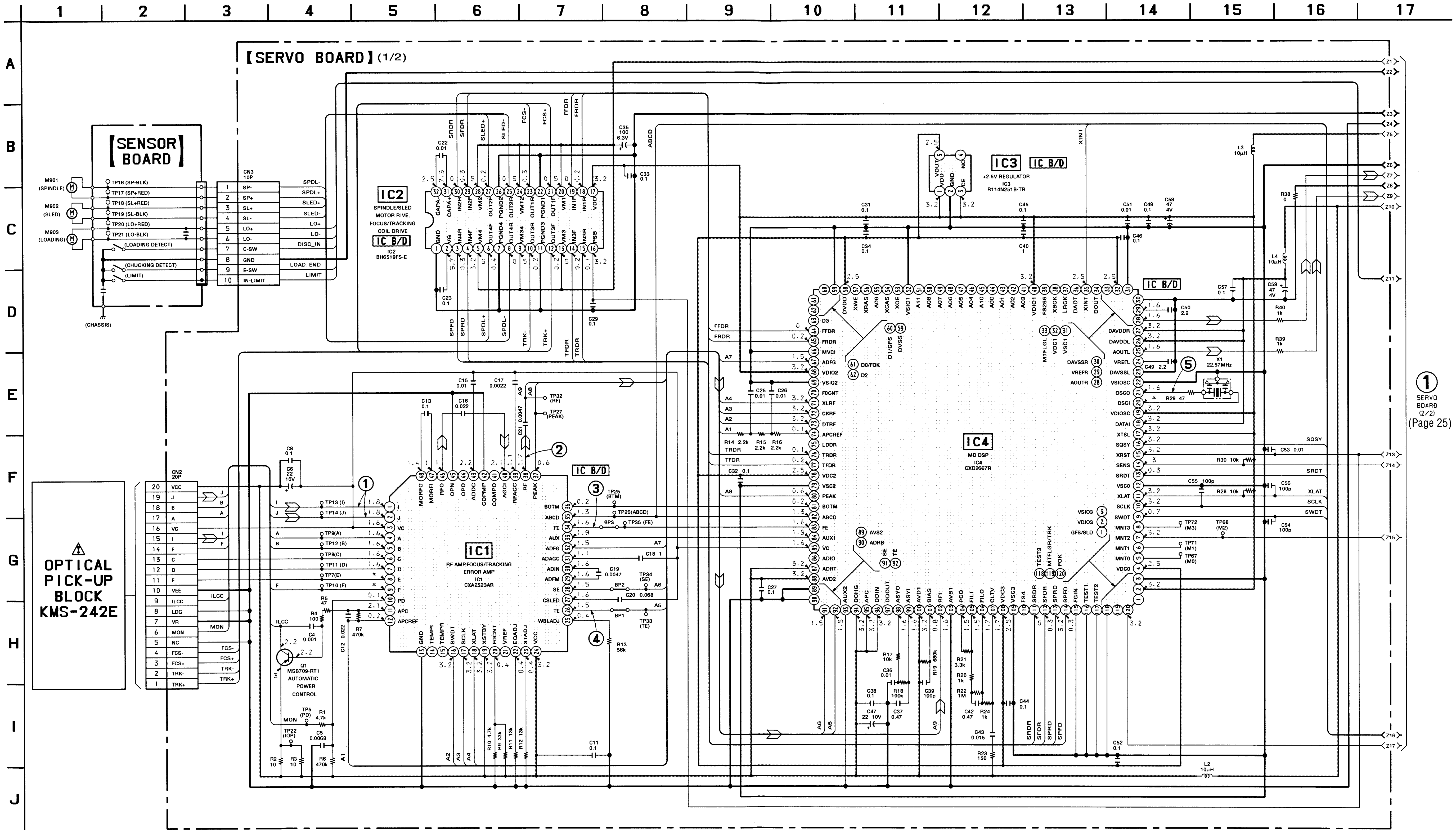
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  – SERVO Section –
  no mark : MD PLAY
  – MAIN/KEY Section –
  no mark : FM
  《 》 : MW
  [ ] : LW
  ( ) : MD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ᐅ : MD PLAY
  ⇨ : FM
  ➡ : AM (MW/LW)
  ⇨» : BUS AUDIO IN

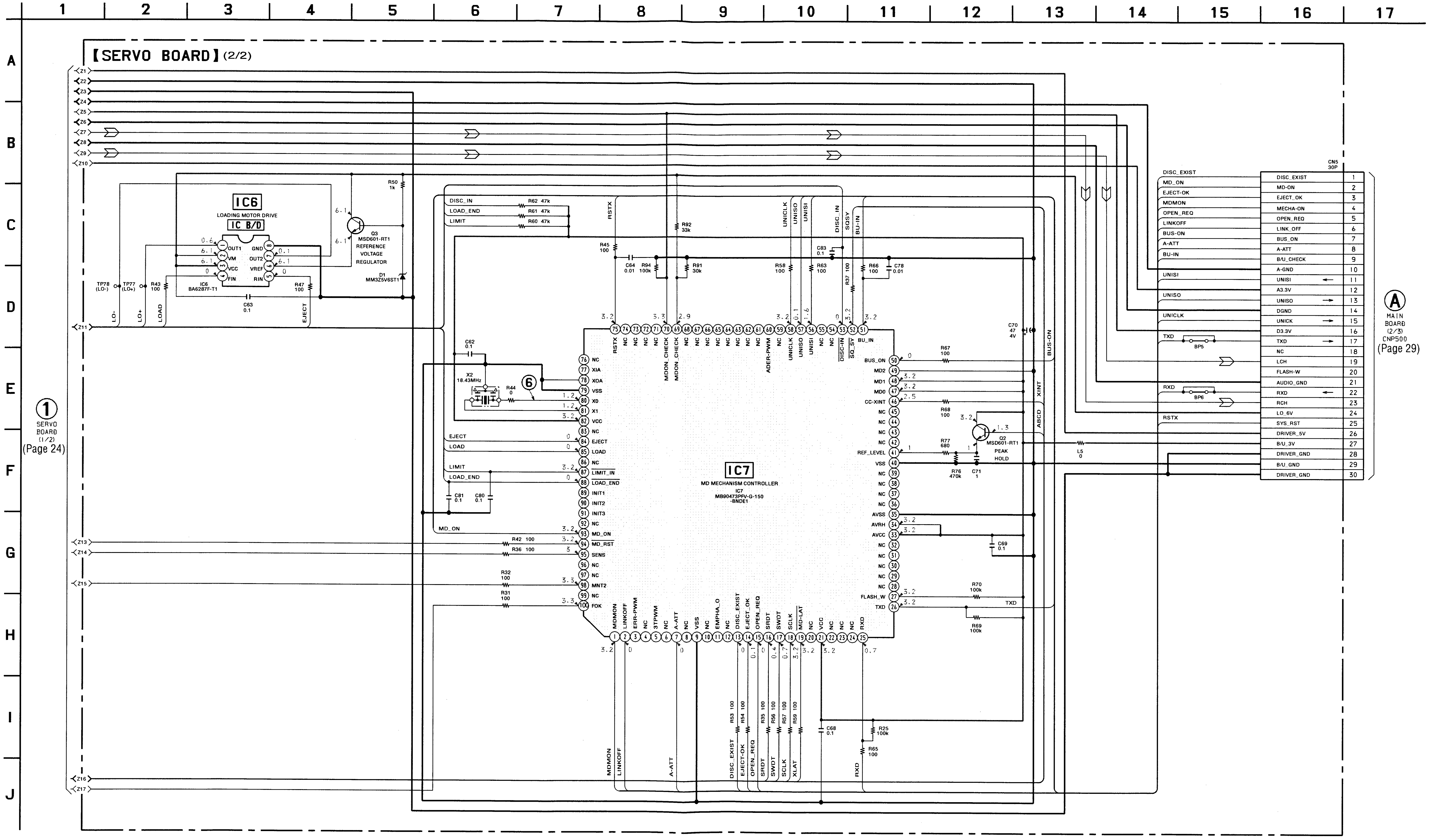
- **Circuit Boards Location**



5-5. SCHEMATIC DIAGRAM – SERVO Section (1/2) – • See page 31 for Waveforms. • See page 16 for IC Block Diagrams.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
[SERVO BOARD] (1/2)
[SENSOR BOARD]
M901 (SPINDLE)
M902 (SLED)
M903 (LOADING)
TP16 (SP-BLK)
TP17 (SP+RED)
TP18 (SL+RED)
TP19 (SL-BLK)
TP20 (LO+RED)
TP21 (LO-BLK)
(LOADING DETECT)
(CHUCKING DETECT)
(LIMIT)
(CHASSIS)
CN3 10P
SP-
SP+
SL+
SL-
LO+
LO-
C-SW
GND
E-SW
IN-LIMIT
SPDL-
SPDL+
SLED+
SLED-
LO+
LO-
DISC_IN
LOAD_END
LIMIT
IC2
SPINDLE/SLED MOTOR RIVE. FOCUS/TRACKING COIL DRIVE
IC B/D
IC2 BH6519FS-E
IC3
+2.5V REGULATOR
IC3 R114N251B-TR
IC4
MD DSP
IC4 CXD2667R
IC1
RF AMP, FOCUS/TRACKING ERROR AMP
IC1 CXA2523AR
OPTICAL PICK-UP BLOCK KMS-242E
CN2 20P
Q1 MSB709-RT1 AUTOMATIC POWER CONTROL
X1 22.57MHz
SERVO BOARD (2/2) (Page 25)
Z1
Z2
Z3
Z4
Z5
Z6
Z7
Z8
Z9
Z10
Z11
Z13
Z14
Z15
Z16
Z17
SQSY
SRDT
XLAT
SCLK
SWDT

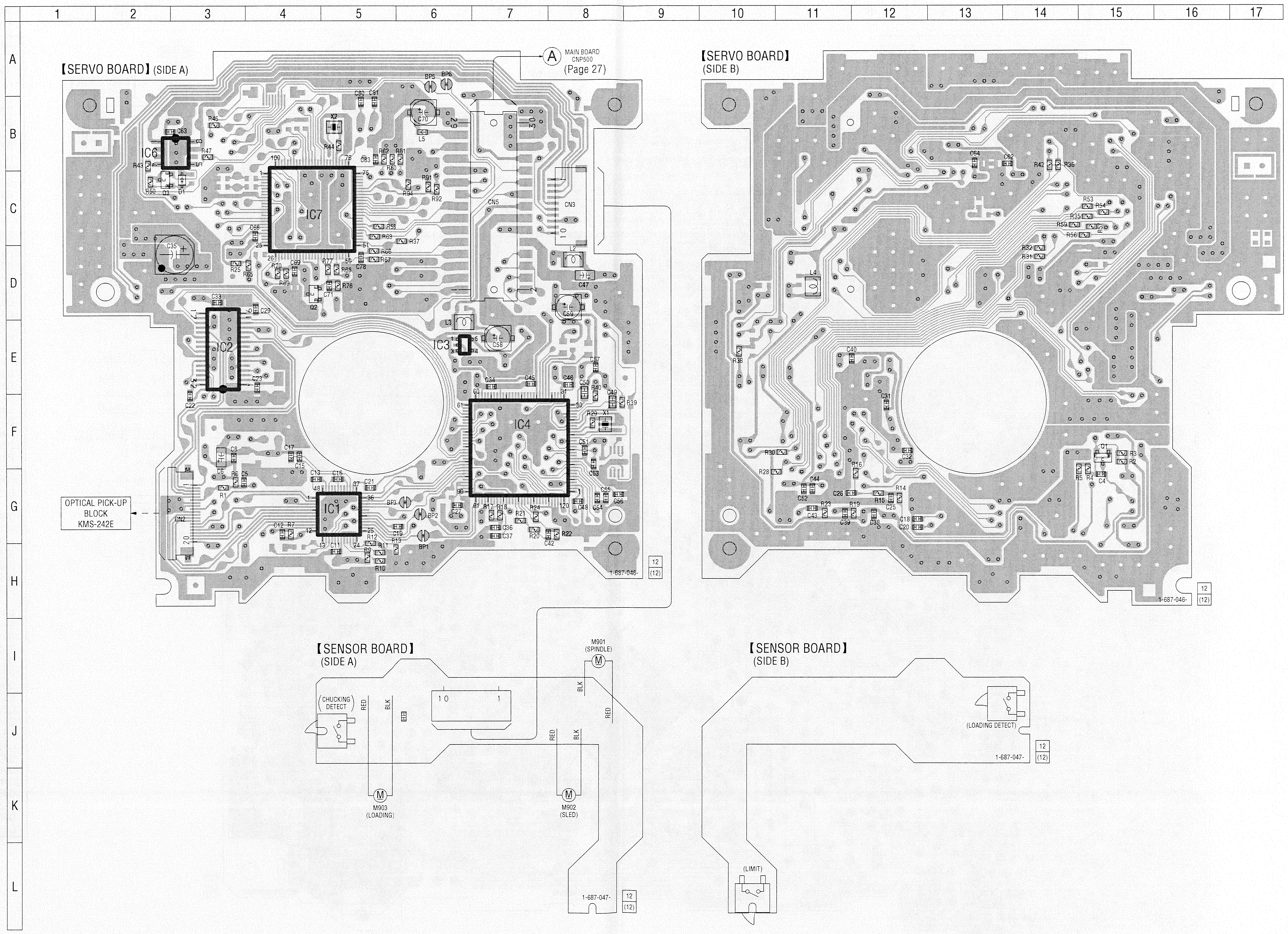
5-6. SCHEMATIC DIAGRAM – SERVO Section (2/2) – • See page 31 for Waveform. • See page 16 for IC Block Diagram.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
【SERVO BOARD】(2/2)
Z1
Z2
Z3
Z4
Z5
Z6
Z7
Z8
Z9
Z10
Z11
Z13
Z14
Z15
Z16
Z17
①
SERVO
BOARD
(1/2)
(Page 24)
IC6
LOADING MOTOR DRIVE
IC B/D
OUT1
VM
VCC
FIN
GND
OUT2
VREF
RIN
IC6
BA6287F-T1
TP78
(LO-)
TP77
(LO+)
R43
100
R47
100
C63
0.1
LO-
LO+
LOAD
EJECT
R50
1k
Q3
MSD601-RT1
REFERENCE
VOLTAGE
REGULATOR
D1
MM3Z5V6ST1
DISC_IN
LOAD_END
LIMIT
R62 47k
R61 47k
R60 47k
R45
100
C64
0.01
R94
100k
R92
33k
R91
30k
R58
100
R63
100
C83
0.1
R37 100
R66
100
C78
0.01
RSTX
UNICLK
UNISO
UNISI
DISC_IN
SQSY
BU-IN
C62
0.1
X2
16.43MHz
R44
0
⑥
EJECT
LOAD
LIMIT
LOAD_END
C81
0.1
C80
0.1
MD_ON
R42 100
R36 100
R32
100
R31
100
IC7
MD MECHANISM CONTROLLER
IC7
MB90473PFV-G-150
-BNDE1
NC
XIA
XOA
VSS
X0
X1
VCC
EJECT
LOAD
LIMIT_IN
LOAD_END
INIT1
INIT2
INIT3
MD_ON
MD_RST
SENS
MNT2
FOK
MDON_CHECK
ADER-PWM
SQ_SY
DISC-IN
BU_IN
BUS_ON
MD2
MD1
MD0
CC-XINT
REF_LEVEL
AVSS
AVRH
AVCC
FLASH_W
TXD
MDMON
LINKOFF
ERR-PWM
3TPWM
A-ATT
EMPHA_O
DISC_EXIST
EJECT_OK
OPEN_REQ
SRDT
SWDT
SCLK
MD-LAT
RXD
XLAT
R67
100
R68
100
R77
680
R76
470k
C71
1
Q2
MSD601-RT1
PEAK
HOLD
C70
47
4V
BUS-ON
XINT
ABCD
C69
0.1
R70
100k
R69
100k
R53 100
R54 100
R35 100
R56 100
R57 100
R59 100
C68
0.1
R25
100k
R65
100
L5
0
DISC_EXIST
MD_ON
EJECT-OK
MDMON
OPEN_REQ
LINKOFF
BUS-ON
A-ATT
BU-IN
UNISI
UNISO
UNICLK
TXD
BP5
RXD
BP6
RSTX
CN5
30P
DISC_EXIST 1
MD-ON 2
EJECT_OK 3
MECHA-ON 4
OPEN_REQ 5
LINK_OFF 6
BUS_ON 7
A-ATT 8
B/U_CHECK 9
A-GND 10
UNISI 11
A3.3V 12
UNISO 13
DGND 14
UNICK 15
D3.3V 16
TXD 17
NC 18
LCH 19
FLASH-W 20
AUDIO_GND 21
RXD 22
RCH 23
LO_6V 24
SYS_RST 25
DRIVER_5V 26
B/U_3V 27
DRIVER_GND 28
B/U_GND 29
DRIVER_GND 30
Ⓐ
MAIN
BOARD
(2/3)
CNP500
(Page 29)

5-7. PRINTED WIRING BOARDS – SERVO Section – • See page 23 for Circuit Boards Location.

- **Semiconductor Location**

Ref. No.	Location
D1	C-3
IC1	G-5
IC2	E-3
IC3	E-6
IC4	F-7
IC6	B-3
IC7	C-4
Q1	F-15
Q2	D-4
Q3	C-2



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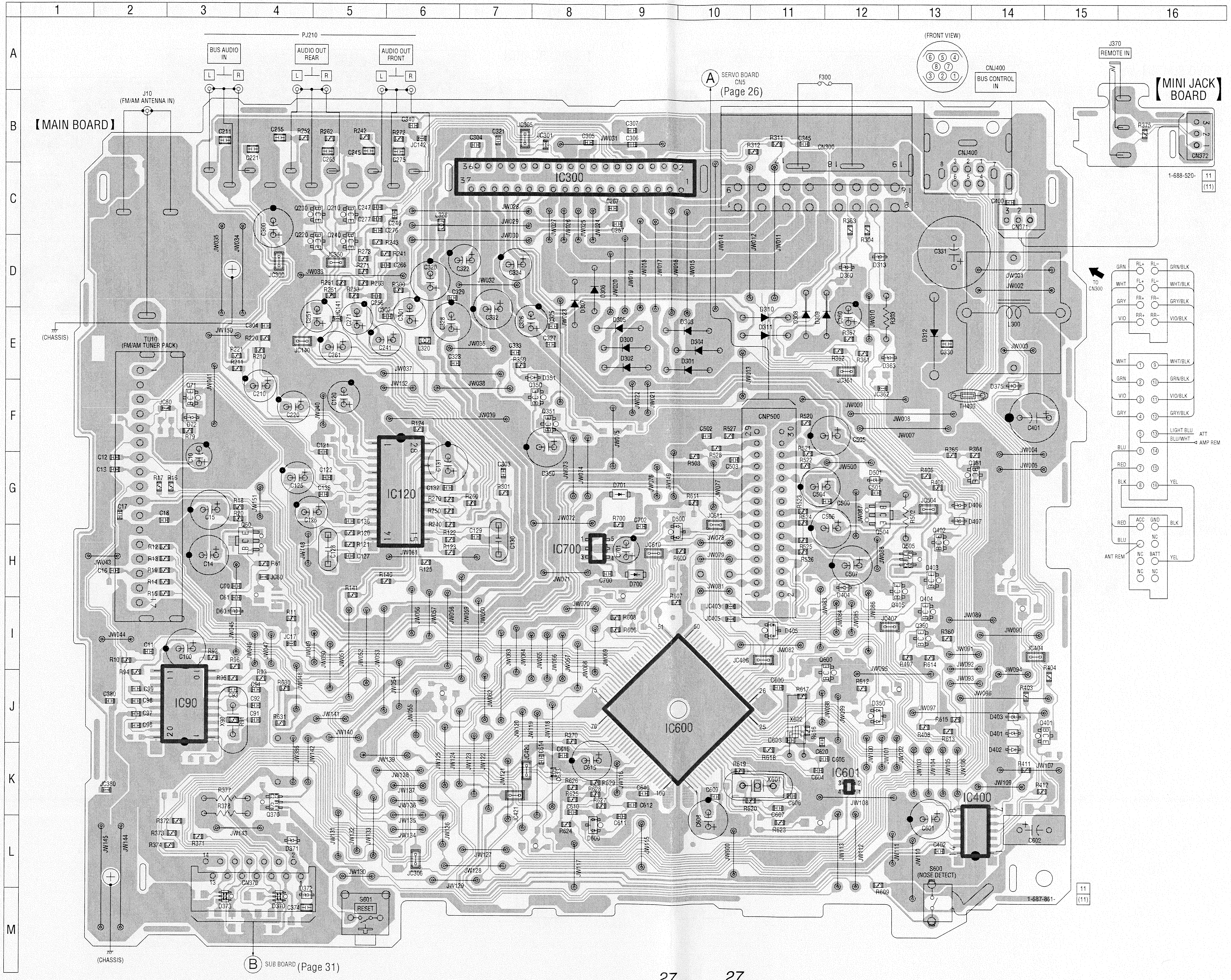
D
E
F
G
H
I
J
K
L
【SERVO BOARD】 (SIDE A)
A MAIN BOARD CNP500 (Page 27)
【SERVO BOARD】 (SIDE B)
IC1
IC2
IC3
IC4
IC6
IC7
CN2
CN3
CN5
OPTICAL PICK-UP BLOCK KMS-242E
1-687-046-
12 (12)
【SENSOR BOARD】 (SIDE A)
【SENSOR BOARD】 (SIDE B)
CHUCKING DETECT
LOADING DETECT
LIMIT
M901 (SPINDLE)
M902 (SLED)
M903 (LOADING)
RED
BLK
1-687-047-

5-8. PRINTED WIRING BOARDS – MAIN Section – • See page 23 for Circuit Boards Location.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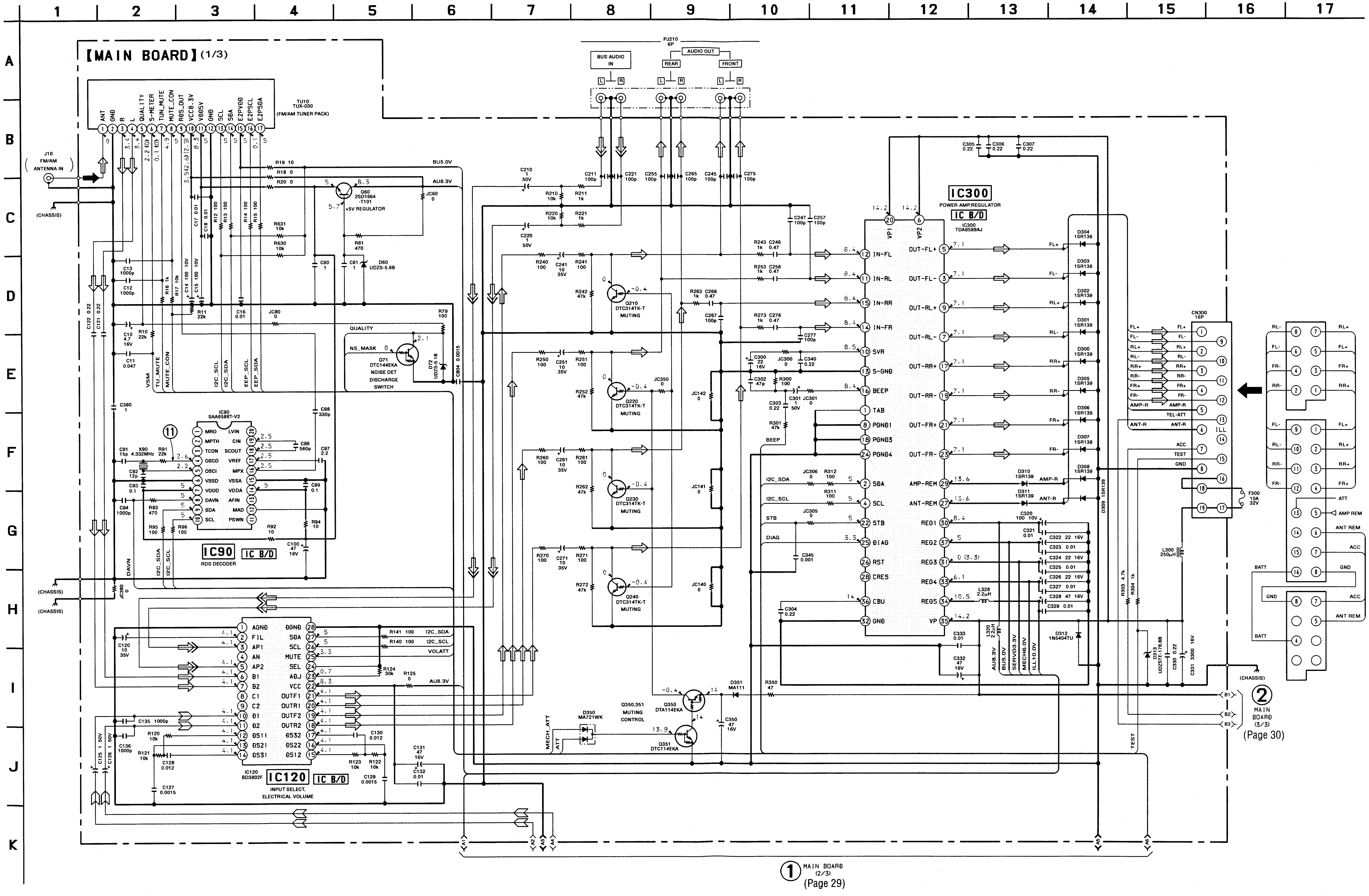
I
J
K
L
M
PJ210
BUS AUDIO IN
AUDIO OUT REAR
AUDIO OUT FRONT
J10 (FM/AM ANTENNA IN)
[MAIN BOARD]
A SERVO BOARD CN5 (Page 26)
F300
(FRONT VIEW)
CNJ400 BUS CONTROL IN
J370 REMOTE IN
[MINI JACK BOARD]
CN372
1-688-520- 11 (11)
IC300
IC120
IC700
IC90
IC600
IC601
IC400
CNP500
CN371
TO CN300
(CHASSIS)
TU10 (FM/AM TUNER PACK)
ANT REM
ATT
AMP REM
S600 (NOSE DETECT)
S601 RESET
1-687-861- 11 (11)
(CHASSIS)
B SUB BOARD (Page 31)

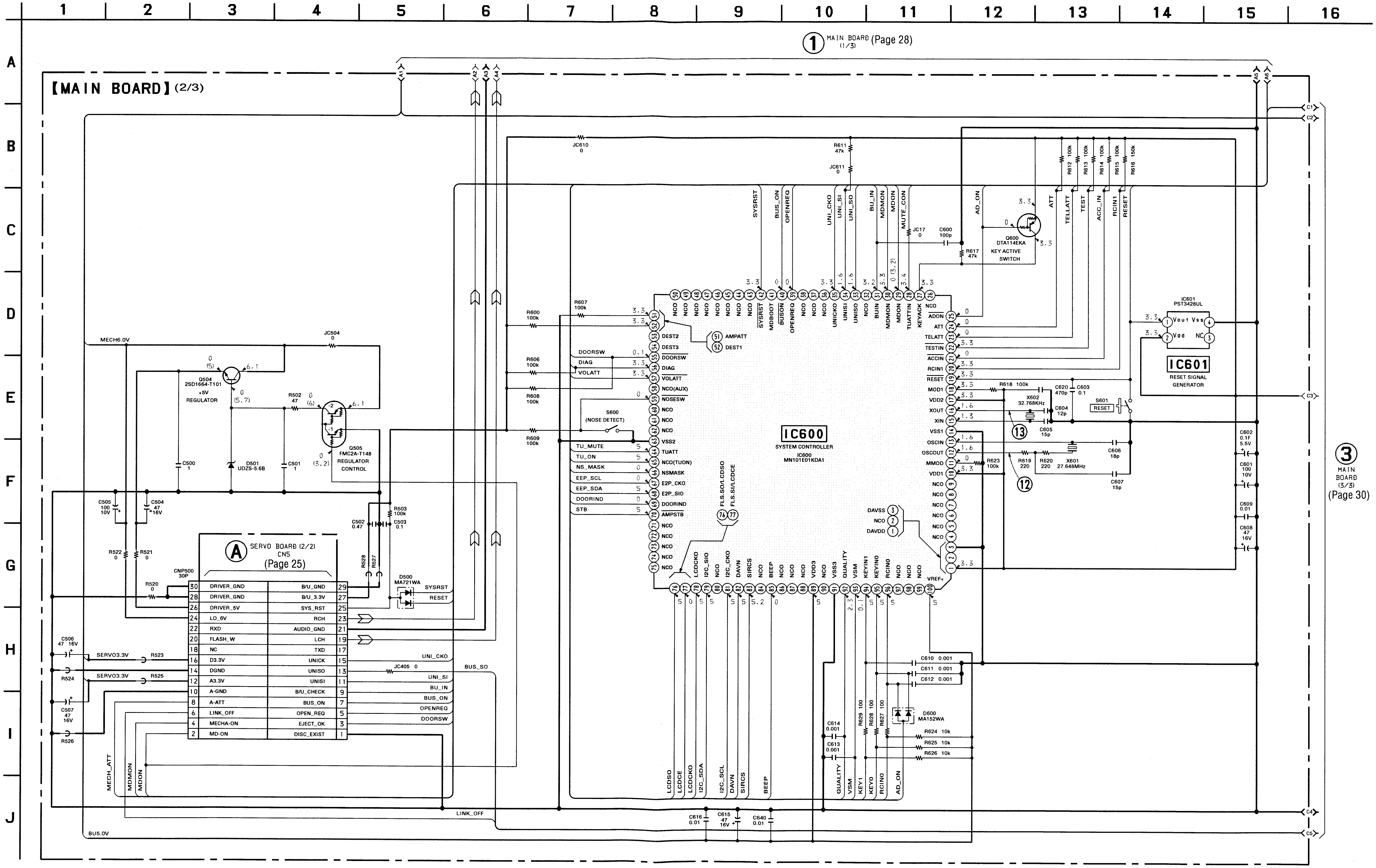
- **Semiconductor Location**

Ref. No.	Location
D60	I-3
D72	F-3
D300	E-9
D301	E-10
D302	E-9
D303	E-10
D304	E-10
D305	E-9
D306	D-8
D307	D-8
D308	E-11
D309	E-12
D310	E-11
D311	E-11
D312	E-13
D313	D-12
D350	J-12
D351	E-8
D360	D-12
D363	E-12
D370	M-4
D371	L-4
D372	M-4
D373	M-3
D375	F-14
D401	J-14
D402	K-14
D403	J-14
D404	H-12
D405	I-11
D406	G-13
D407	G-13
D500	H-10
D501	G-12
D600	L-8
D700	H-9
D701	G-9
IC90	J-3
IC120	G-6
IC300	C-8
IC400	L-14
IC600	J-9
IC601	K-12
IC700	H-8
Q60	H-4
Q71	F-3
Q210	C-5
Q220	D-5
Q230	C-5
Q240	D-5
Q350	F-8
Q351	F-8
Q360	I-13
Q361	G-14
Q370	K-4
Q401	J-15
Q402	H-13
Q403	H-13
Q404	I-13
Q405	H-12
Q504	G-12
Q505	H-13
Q600	I-12

5-9. SCHEMATIC DIAGRAM – MAIN Section (1/3) – • See page 31 for Waveform. • See page 16 for IC Block Diagrams.


[MAIN BOARD] (1/3)
TU10 TUX-030 (FM/AM TUNER PACK)
ANT GND R L QUALITY S-METER TUN_MUTE MUTE_CON RDS_OUT VCC8.3V VDD5V GND SCL SDA E2PVDD E2PSCL E2PSDA
J10 FM/AM ANTENNA IN
(CHASSIS)
Q60 2SD1664 -T101 +5V REGULATOR
D60 UDZS-5.6B
BU5.0V
AU8.3V
QUALITY
NS_MASK
Q71 DTC144EKA NOISE DET DISCHARGE SWITCH
IC90 SAA6588T-V2
MRO MPTH TCON OSCO OSCI VSSD VDDD DAVN SDA SCL LVIN CIN SCOUT VREF MPX VSSA VDDA AFIN MAD PSWN
X90 4.332MHz
IC90 RDS DECODER
IC B/D
VSM TU_MUTE MUTE_CON I2C_SCL I2C_SDA EEP_SCL EEP_SDA
DAVN I2C_SDA I2C_SCL
IC120 BD3802F
AGND FIL AP1 AN AP2 B1 B2 C1 C2 θ1 θ2 θS11 θS21 θS31
DGND SDA SCL MUTE SEL ADJ VCC OUTF1 OUTR1 OUTF2 OUTR2 θS32 θS22 θS12
IC120 INPUT SELECT, ELECTRICAL VOLUME
PJ210 6P
BUS AUDIO IN
AUDIO OUT
REAR
FRONT
L R
Q210 DTC314TK-T MUTING
Q220 DTC314TK-T MUTING
Q230 DTC314TK-T MUTING
Q240 DTC314TK-T MUTING
IC300 POWER AMP,REGULATOR
IC300 TDA8588AJ
VP1 VP2
IN-FL IN-RL IN-RR IN-FR SVR S-GND BEEP TAB PGND1 PGND3 PGND4 SDA SCL STB DIAG RST CRES CBU GND
OUT-FL+ OUT-FL- OUT-RL+ OUT-RL- OUT-RR+ OUT-RR- OUT-FR+ OUT-FR- AMP-REM ANT-REM REG1 REG2 REG3 REG4 REG5 VP
I2C_SDA I2C_SCL STB DIAG BEEP
D300–D309 1SR139
D310 1SR139 D311 1SR139
D312 1N5404TU
D313 UDZSTE-178.8B
L300 250μH
L328 2.2μH
AU8.3V BU5.0V SERVO3.3V MECH6.0V ILL10.0V
D350 MA721WK
Q350,351 MUTING CONTROL
Q350 DTA114EKA
Q351 DTC114EKA
D351 MA111
MECH_ATT ATT
CN300 16P
FL+ FL- RL+ RL- RR+ RR- FR+ FR- AMP-R TEL-ATT ANT-R ACC TEST GND ILL
F300 10A 32V
ATT AMP REM ANT REM ACC GND BATT
TEST
① MAIN BOARD (2/3) (Page 29)
② MAIN BOARD (3/3) (Page 30)

5-10. SCHEMATIC DIAGRAM – MAIN Section (2/3) – • See page 31 for Waveforms.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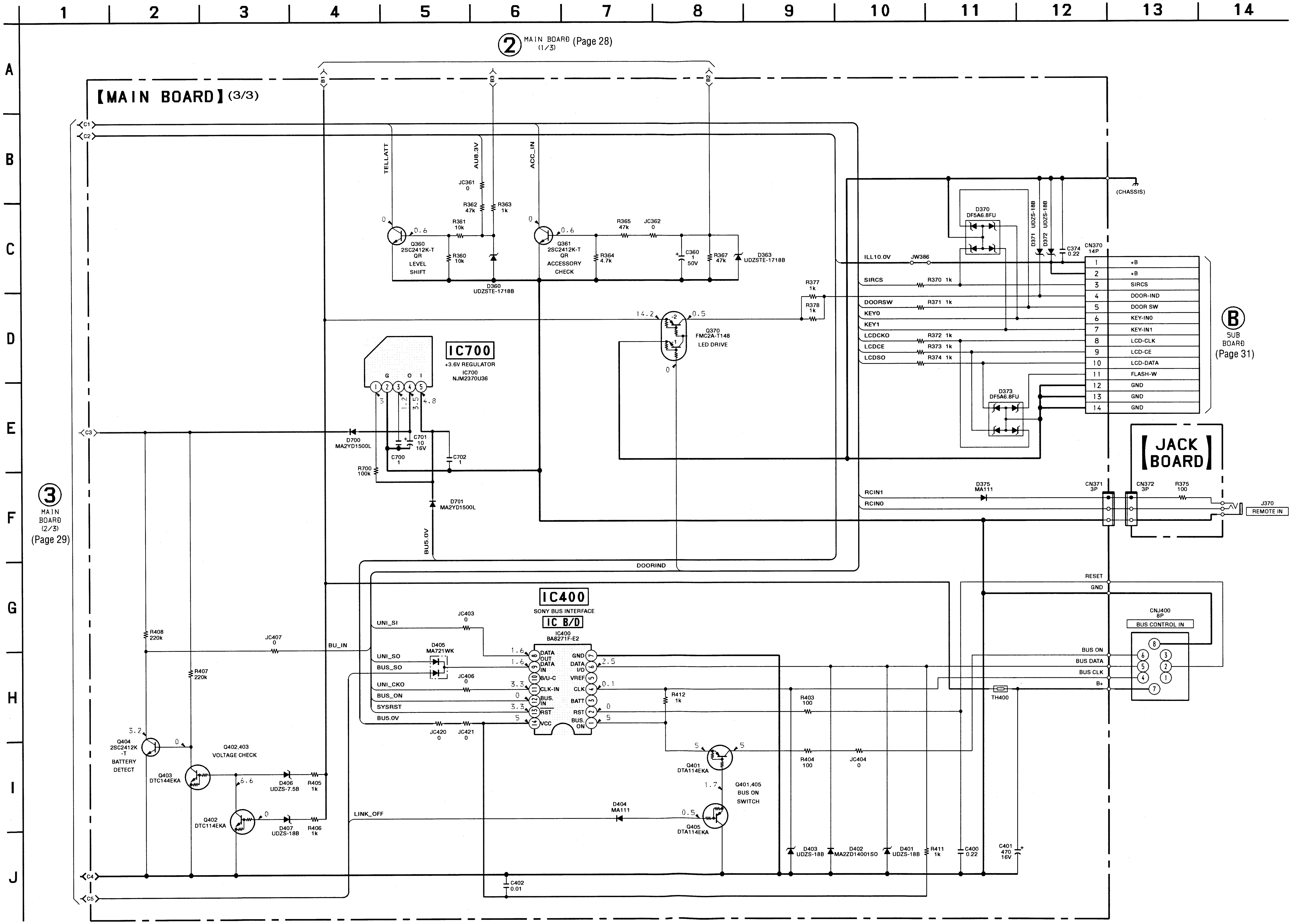
J
① MAIN BOARD (1/3) (Page 28)
【MAIN BOARD】(2/3)
A1
A2
A3
A4
A5
A6
C1
C2
C3
C4
C5
IC600
SYSTEM CONTROLLER
IC600 MN101E01KDA1
IC601
RESET SIGNAL GENERATOR
IC601 PST3428UL
Vout
Vss
Vdd
NC
Q600 DTA114EKA KEY ACTIVE SWITCH
Q504 2SD1664-T101 +5V REGULATOR
Q505 FMC2A-T148 REGULATOR CONTROL
D501 UDZS-5.6B
D500 MA721WA
D600 MA152WA
X601 27.648MHz
X602 32.768KHz
S600 (NOSE DETECT)
S601 RESET
Ⓐ SERVO BOARD (2/2) CN5 (Page 25)
CNP500 30P
③ MAIN BOARD (3/3) (Page 30)
MECH6.0V
BU5.0V
SERVO3.3V
DRIVER_GND
DRIVER_5V
LO_6V
RXD
FLASH_W
NC
D3.3V
DGND
A3.3V
A-GND
A-ATT
LINK_OFF
MECHA-ON
MD-ON
B/U_GND
B/U_3.3V
SYS_RST
RCH
AUDIO_GND
LCH
TXD
UNICK
UNISO
UNISI
B/U_CHECK
BUS_ON
OPEN_REQ
EJECT_OK
DISC_EXIST
SYSRST
RESET
UNI_CKO
UNI_SI
UNI_SO
BU_IN
OPENREQ
DOORSW
BUS_SO
MECH_ATT
MDMON
MDON
DIAG
VOLATT
TU_MUTE
TU_ON
NS_MASK
EEP_SCL
EEP_SDA
DOORIND
STB
DEST2
DEST3
AMPATT
DEST1
NOSESW
NCO
VSS2
TUATT
NCO(TUON)
NSMASK
E2P_CKO
E2P_SIO
AMPSTB
NCO(AUX)
SYSRST
MDBOOT
BUSON
OPENREQ
UNICKO
UNISI
UNISO
BUIN
MDMON
MDON
TUATTIN
KEYACK
ADON
ATT
TELATT
TESTIN
ACCIN
RCIN1
MOD1
VDD2
XOUT
XIN
VSS1
OSCIN
OSCOUT
MMOD
VDD1
DAVSS
DAVDD
VREF+
LCDCKO
I2C_SIO
I2C_CKO
DAVN
SIRCS
BEEP
VDD3
VSS3
QUALITY
VSM
KEYIN1
KEYINO
RCINO
FLS.SO/LCDSO
FLS.SI/LCDCE
LCDSO
LCDCE
LCDCKO
I2C_SDA
I2C_SCL
KEY1
KEY0
AD_ON
AD_ON
ATT
TELLATT
TEST
ACC_IN
RCIN1
MUTE_CON
LINK_OFF
R600 100k
R606 100k
R608 100k
R609 100k
R607 100k
R611 47k
R612 100k
R613 100k
R614 100k
R615 100k
R616 150k
R617 47k
R618 100k
R619 220
R620 220
R623 100k
R624 10k
R625 10k
R626 10k
R627 100
R628 100
R629 100
R502 47
R503 100k
R520 0
R521 0
R522 0
R523
R524
R525
R526
R527
R528
JC504 0
JC610 0
JC611 0
JC17 0
JC405 0
C500 1
C501 1
C502 0.47
C503 0.1
C504 47 16V
C505 100 10V
C506 47 16V
C507 47 16V
C600 100p
C601 100 10V
C602 0.1F 5.5V
C603 0.1
C604 12p
C605 15p
C606 18p
C607 15p
C608 47 16V
C609 0.01
C610 0.001
C611 0.001
C612 0.001
C613 0.001
C614 0.001
C615 47 16V
C616 0.01
C620 470p
C640 0.01
⑫
⑬

5-11. SCHEMATIC DIAGRAM – MAIN Section (3/3) – • See page 16 for IC Block Diagram.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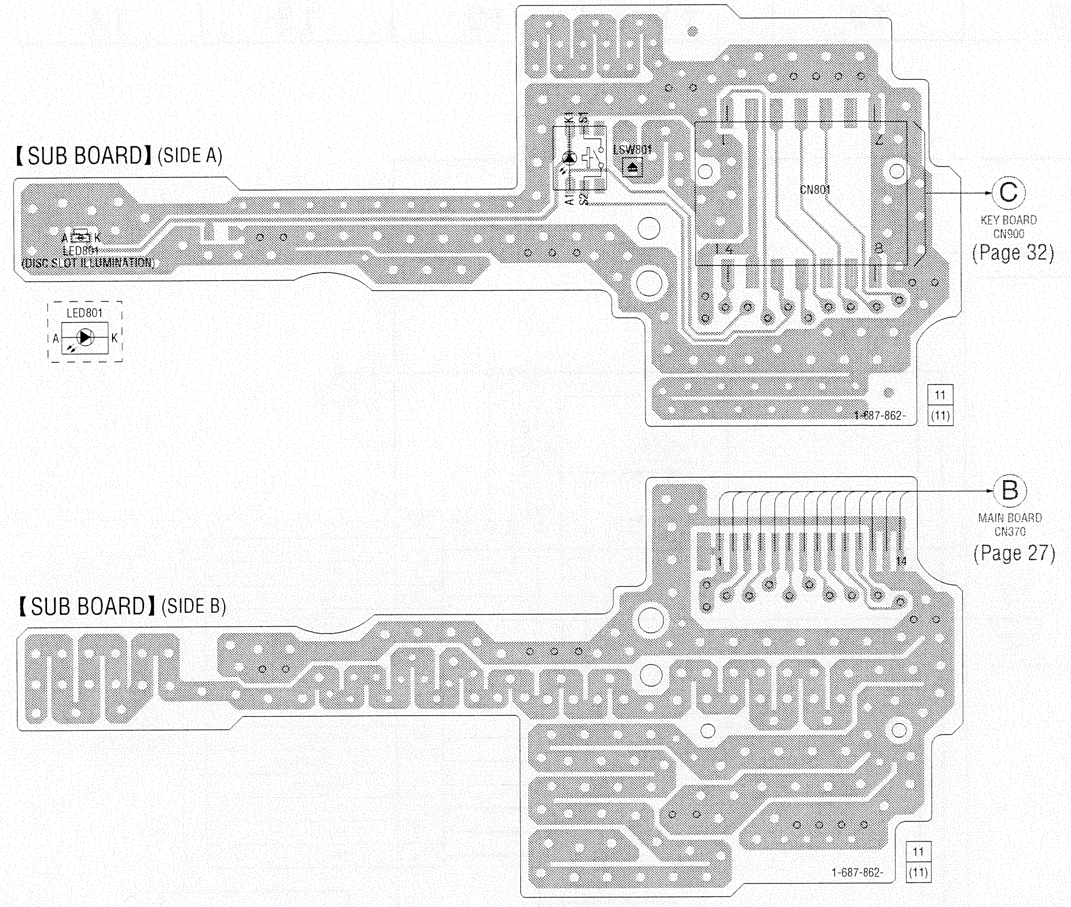
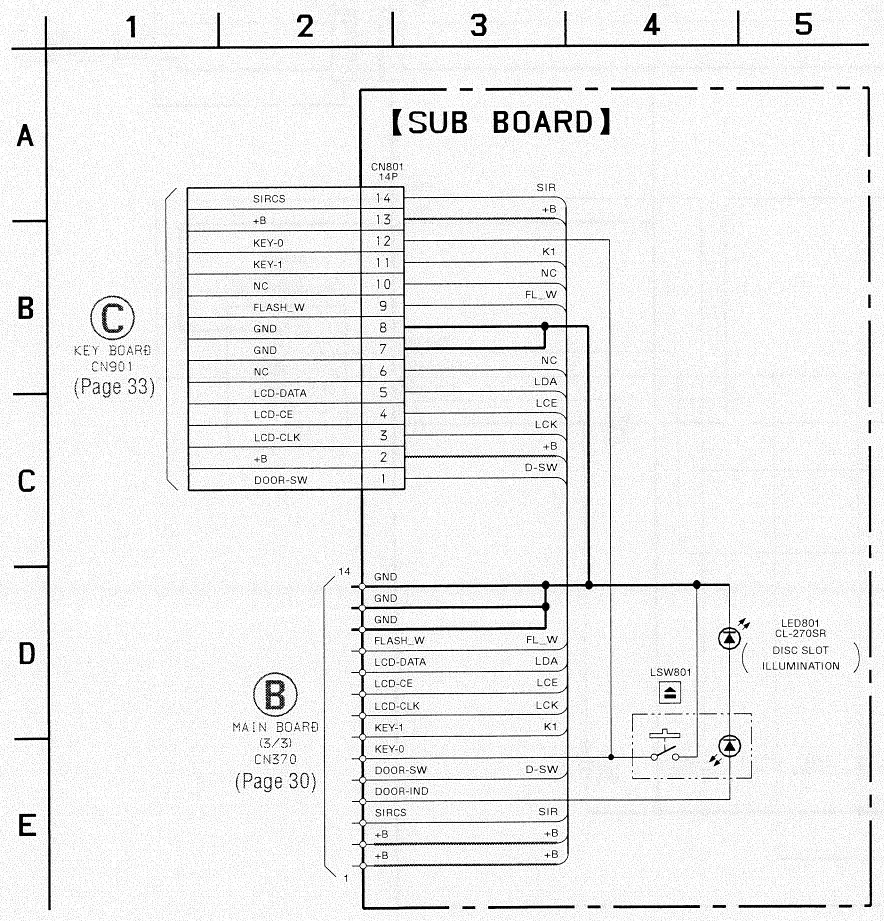
J
② MAIN BOARD (1/3) (Page 28)
【MAIN BOARD】(3/3)
B1
B3
B2
C1
C2
C3
C4
C5
TELLATT
AU8.3V
ACC_IN
JC361 0
R362 47k
R363 1k
R361 10k
Q360 2SC2412K-T QR LEVEL SHIFT
R360 10k
D360 UDZSTE-1718B
Q361 2SC2412K-T QR ACCESSORY CHECK
R364 4.7k
R365 47k
JC362 0
C360 1 50V
R367 47k
D363 UDZSTE-1718B
R377 1k
R378 1k
Q370 FMC2A-T148 LED DRIVE
IC700
+3.6V REGULATOR IC700 NJM2370U36
G O I
D700 MA2YD1500L
C701 10 16V
C700 1
C702 1
R700 100k
D701 MA2YD1500L
BUS5.0V
DOORIND
D370 DF5A6.8FU
D371 UDZS-18B
D372 UDZS-18B
C374 0.22
(CHASSIS)
ILL10.0V
JW386
SIRCS
R370 1k
DOORSW
R371 1k
KEY0
KEY1
LCDCKO
R372 1k
LCDCE
R373 1k
LCDSO
R374 1k
D373 DF5A6.8FU
CN370 14P
1 +B
2 +B
3 SIRCS
4 DOOR-IND
5 DOOR SW
6 KEY-IN0
7 KEY-IN1
8 LCD-CLK
9 LCD-CE
10 LCD-DATA
11 FLASH-W
12 GND
13 GND
14 GND
Ⓑ SUB BOARD (Page 31)
【JACK BOARD】
RCIN1
RCIN0
D375 MA111
CN371 3P
CN372 3P
R375 100
J370 REMOTE IN
③ MAIN BOARD (2/3) (Page 29)
RESET
GND
CNJ400 8P BUS CONTROL IN
BUS ON
BUS DATA
BUS CLK
B+
TH400
IC400
SONY BUS INTERFACE
IC B/D
IC400 BA8271F-E2
UNI_SI
JC403 0
UNI_SO
D405 MA721WK
BUS_SO
UNI_CKO
JC406 0
BUS_ON
SYSRST
BU5.0V
JC420 0
JC421 0
BU_IN
JC407 0
DATA OUT
DATA IN
B/U-C
CLK-IN
BUS. IN
RST
VCC
GND
DATA I/O
VREF
CLK
BATT
RST
BUS. ON
R412 1k
R403 100
R404 100
JC404 0
Q401 DTA114EKA
Q401,405 BUS ON SWITCH
D404 MA111
Q405 DTA114EKA
LINK_OFF
R408 220k
R407 220k
Q404 2SC2412K -T BATTERY DETECT
Q402,403 VOLTAGE CHECK
Q403 DTC144EKA
Q402 DTC114EKA
D406 UDZS-7.5B
R405 1k
D407 UDZS-18B
R406 1k
D403 UDZS-18B
D402 MA2ZD14001SO
D401 UDZS-18B
R411 1k
C400 0.22
C401 470 16V
C402 0.01

5-12. PRINTED WIRING BOARD – SUB Section – • See page 23 for Circuit Boards Location.


[SUB BOARD] (SIDE A)
LED801
(DISC SLOT ILLUMINATION)
LSW801
CN801
C
KEY BOARD
CN900
(Page 32)
1-687-862-
11
(11)
[SUB BOARD] (SIDE B)
B
MAIN BOARD
CN370
(Page 27)
1
14
1-687-862-
11
(11)

5-13. SCHEMATIC DIAGRAM – SUB Section –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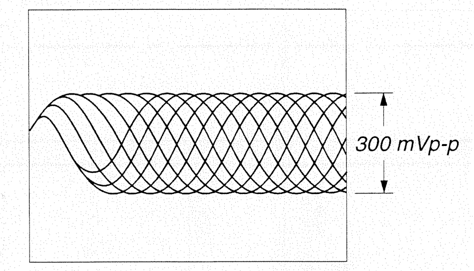
C
D
E
[SUB BOARD]
CN801
14P
C
KEY BOARD
CN901
(Page 33)
SIRCS
+B
KEY-0
KEY-1
NC
FLASH_W
GND
GND
NC
LCD-DATA
LCD-CE
LCD-CLK
+B
DOOR-SW
SIR
+B
K1
NC
FL_W
NC
LDA
LCE
LCK
+B
D-SW
B
MAIN BOARD
(3/3)
CN370
(Page 30)
GND
GND
GND
FLASH_W
LCD-DATA
LCD-CE
LCD-CLK
KEY-1
KEY-0
DOOR-SW
DOOR-IND
SIRCS
+B
+B
FL_W
LDA
LCE
LCK
K1
D-SW
SIR
+B
+B
LSW801
LED801
CL-270SR
DISC SLOT
ILLUMINATION

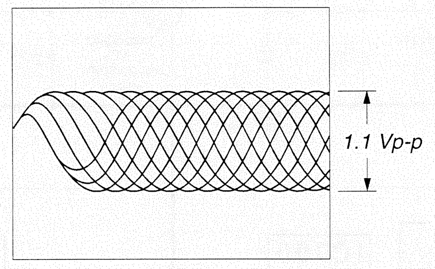
- Waveforms

– SERVO Board –

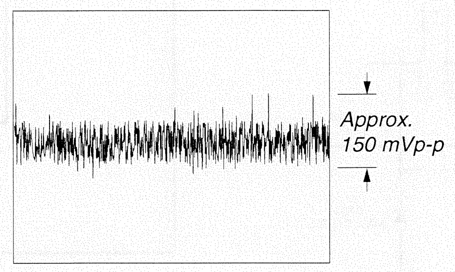
❶ IC1 ①, ② (I, J)



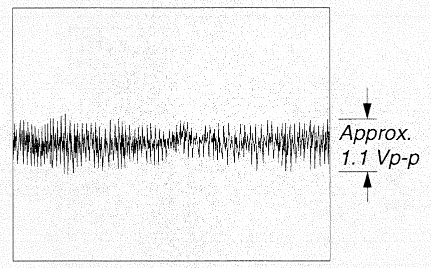
❷ IC1 ㊳ (RF)



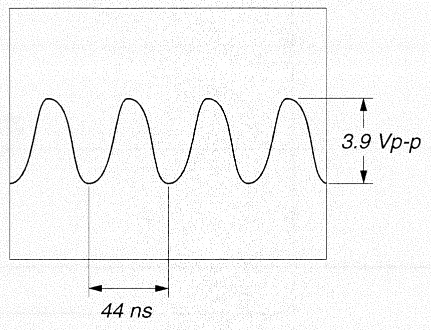
❸ IC1 ㉞ (FE)



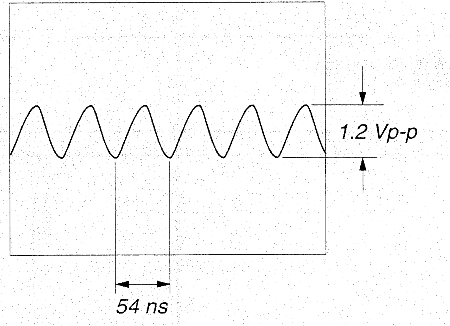
❹ IC1 ㉖ (TE)



❺ IC4 ㉑ (OSCO)

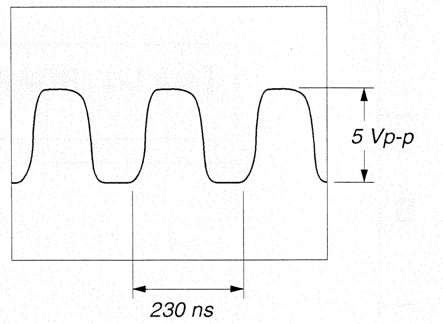


❻ IC7 (80) (X0)

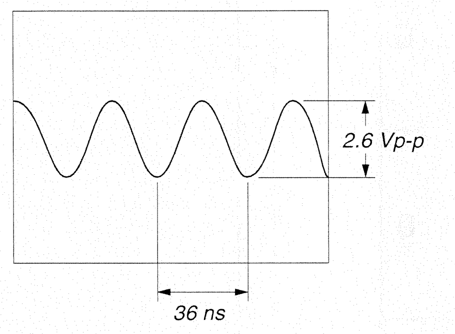


– MAIN Board –

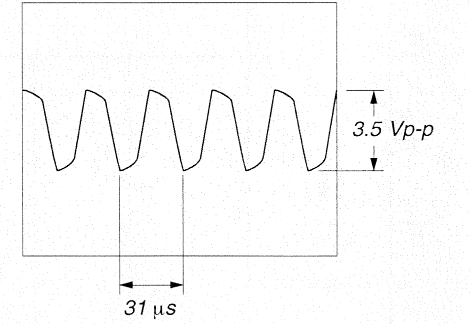
⓫ IC90 ④ (OSCO)



⓬ IC600 ⑫ (OSCOUT)

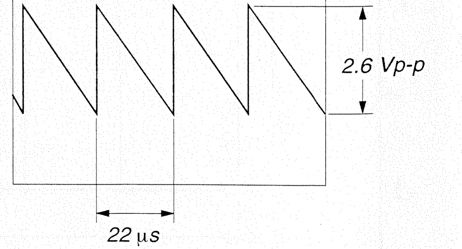


⓭ IC600 ⑯ (XOUT)

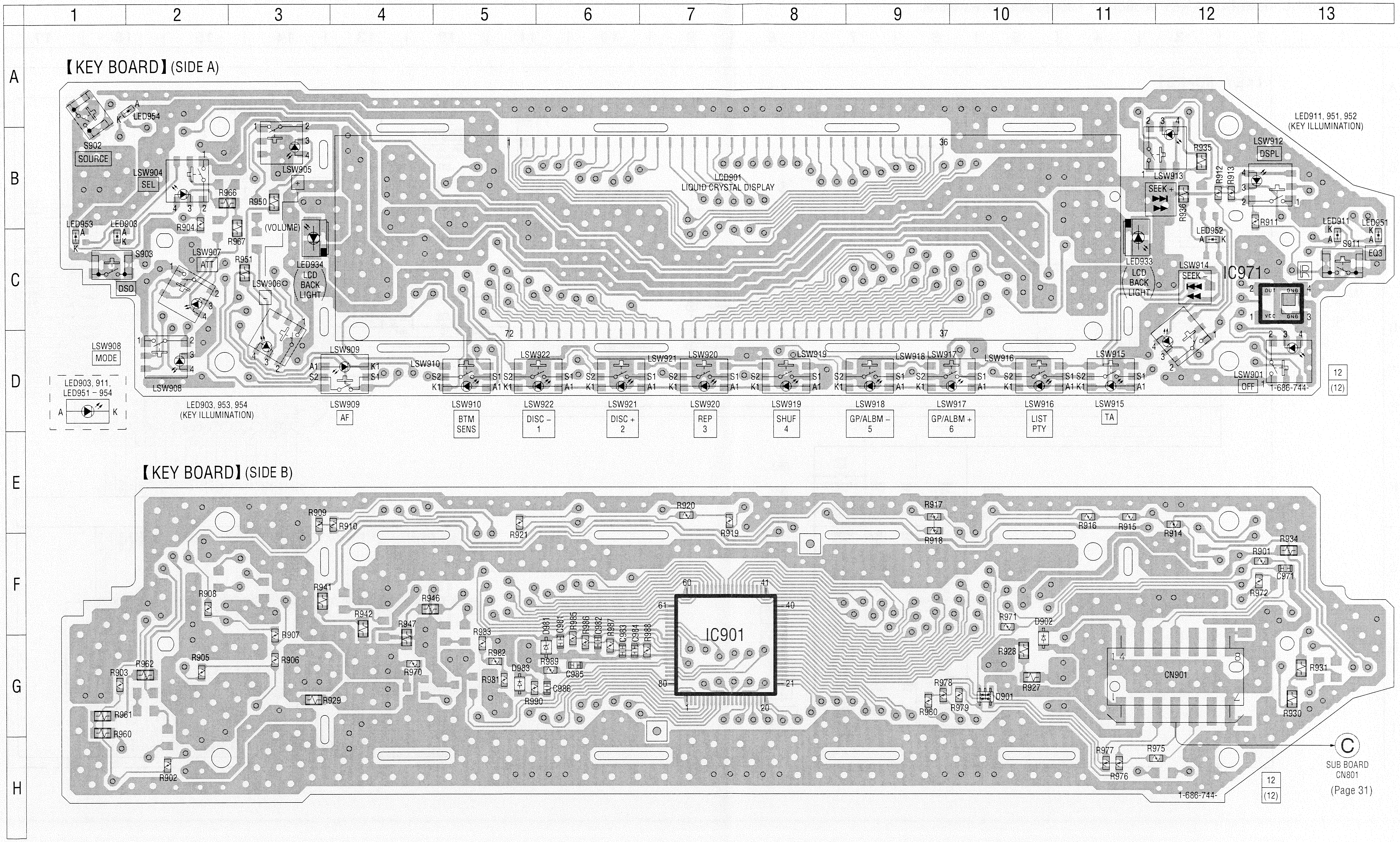


– KEY Board –

⓮ IC901 (74) (OSC)



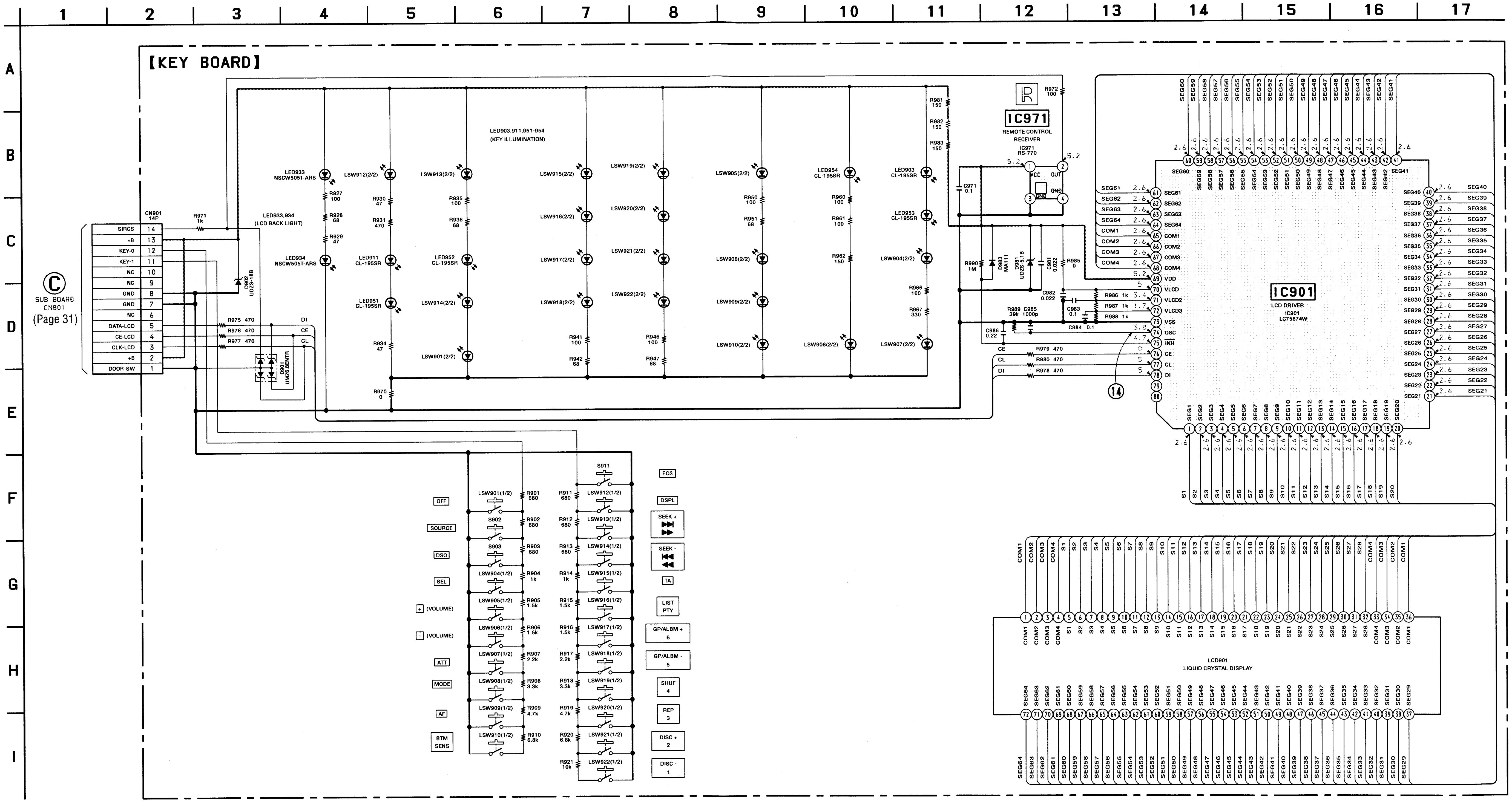
5-14. PRINTED WIRING BOARD – KEY Section – • See page 23 for Circuit Boards Location.


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
【KEY BOARD】(SIDE A)
LED954
S902
SOURCE
LSW904
SEL
LSW905
R966
R950
R904
(VOLUME)
R967
LED953
LED908
S903
DSO
LSW907
ATT
R951
LSW906
LED934
LCD BACK LIGHT
LSW908
MODE
LED903, 911, LED951 – 954
LED903, 953, 954 (KEY ILLUMINATION)
LSW909
AF
LCD901
LIQUID CRYSTAL DISPLAY
1
36
72
37
LSW910
BTM SENS
LSW922
DISC – 1
LSW921
DISC + 2
LSW920
REP 3
LSW919
SHUF 4
LSW918
GP/ALBM – 5
LSW917
GP/ALBM + 6
LSW916
LIST PTY
LSW915
TA
R935
LSW913
SEEK +
R936
R912
R913
R911
LED952
LED933
LCD BACK LIGHT
LSW914
SEEK –
IC971
LSW912
DSPL
LED911
LED951
S911
EQ3
LED911, 951, 952 (KEY ILLUMINATION)
LSW901
OFF
1-686-744-
12
(12)
【KEY BOARD】(SIDE B)
R909
R910
R921
R920
R919
R917
R918
R916
R915
R914
R934
R901
C971
R972
R908
R941
R946
R942
R947
R907
R906
R905
R962
R903
R961
R960
R929
R902
R970
R983
R982
R981
D983
D981
C981
R985
R986
C982
R987
C983
C984
R988
R989
C985
C986
R990
IC901
60
41
61
40
80
21
1
20
R971
D902
R928
R927
R978
R979
R980
D901
CN901
R931
R930
R977
R976
R975
C
SUB BOARD CN801
(Page 31)
1-686-744-
12
(12)

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D901	G-10	LED903	C-1
D902	G-10	LED911	C-13
D981	G-6	LED933	C-11
D983	G-5	LED934	C-3
		LED951	C-13
IC901	G-7	LED952	C-12
IC971	C-13	LED953	C-1
		LED954	A-2

5-15. SCHEMATIC DIAGRAM – KEY Section – • See page 31 for Waveform.


[KEY BOARD]
C SUB BOARD CNB01 (Page 31)
CN901 14P
SIRCS
+B
KEY-0
KEY-1
NC
GND
DATA-LCD
CE-LCD
CLK-LCD
DOOR-SW
R971 1k
LED933,934 (LCD BACK LIGHT)
LED903,911,951-954 (KEY ILLUMINATION)
LED933 NSCW505T-ARS
LED934 NSCW505T-ARS
D902 UDZS-18B
D901 UMZ6.8ENTR
R975 470
R976 470
R977 470
DI
CE
CL
R
IC971
REMOTE CONTROL RECEIVER
IC971 RS-770
VCC
OUT
GND
R972 100
R981 150
R982 150
R983 150
C971 0.1
R990 1M
D982 MA111
D981 UDZS-5.1B
C981 0.022
R985 0
C982 0.022
R989 39k
C985 1000p
C983 0.1
C984 0.1
C986 0.22
R986 1k
R987 1k
R988 1k
R979 470
R980 470
R978 470
IC901
LCD DRIVER
IC901 LC75874W
VDD
VLCD
VLCD2
VLCD3
VSS
OSC
INH
CE
CL
DI
COM1
COM2
COM3
COM4
SEG1 – SEG64
S1 – S20
14
LCD901
LIQUID CRYSTAL DISPLAY
LSW901(1/2) – LSW922(1/2)
S902
S903
S911
R901 680
R902 680
R903 680
R904 1k
R905 1.5k
R906 1.5k
R907 2.2k
R908 3.3k
R909 4.7k
R910 6.8k
R911 680
R912 680
R913 680
R914 1k
R915 1.5k
R916 1.5k
R917 2.2k
R918 3.3k
R919 4.7k
R920 6.8k
R921 10k
OFF
SOURCE
DSO
SEL
+ (VOLUME)
– (VOLUME)
ATT
MODE
AF
BTM SENS
EQ3
DSPL
SEEK +
SEEK -
TA
LIST PTY
GP/ALBM + 6
GP/ALBM - 5
SHUF 4
REP 3
DISC + 2
DISC - 1
LED911 CL-195SR
LED951 CL-195SR
LED952 CL-195SR
LED953 CL-195SR
LED954 CL-195SR
LED903 CL-195SR
R927 100
R928 68
R929 47
R930 47
R931 470
R934 47
R935 100
R936 68
R941 100
R942 68
R946 100
R947 68
R950 100
R951 68
R960 100
R961 100
R962 150
R966 100
R967 330
R970 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
A B C D E F G H I

5-16. IC PIN FUNCTION DESCRIPTION

• SERVO BOARD IC1 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used
16	SWDT	I	Writing serial data input from the MD DSP
17	SCLK	I	Serial data transfer clock signal input from the MD DSP
18	XLAT	I	Serial data latch pulse signal input from the MD DSP
19	XSTBY	I	Standby signal input terminal "L": standby (fixed at "H" in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output terminal
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output terminal
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz ± 1 kHz) output terminal
33	AUX	O	Auxiliary signal (I_3 signal/temperature signal) output terminal
34	FE	O	Focus error signal output terminal
35	ABCD	O	Light amount signal (ABCD) output terminal
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output terminal
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output terminal
38	RF	O	Playback EFM RF signal output terminal
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used
42	COMPP	I	User comparator input terminal Not used
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used
45	OPN	I	User operational amplifier inversion input terminal Not used
46	RFO	O	RF signal output
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output

• SERVO BOARD IC4 CXD2667R (MD DSP)

Pin No.	Pin Name	I/O	Description
1	GFS/SLD	O	GFS output or sled servo drive signal output terminal Not used
2	VDIO3	—	Power supply terminal (+3.3V)
3	VSIO3	—	Ground terminal
4	VDC0	—	Power supply terminal (+2.5V)
5	MNT0	I/O	Busy monitor signal input or output terminal Not used
6	MNT1	O	Busy monitor signal output terminal Not used
7	MNT2	O	Busy monitor signal output to the MD mechanism controller (reserve terminal)
8	MNT3	O	Busy monitor signal output terminal Not used
9	SWDT	I	Writing serial data input from the MD mechanism controller
10	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller
11	XLAT	I	Serial data latch pulse input from the MD mechanism controller
12	VSC0	—	Ground terminal
13	SRDT	O	Reading serial data output to the MD mechanism controller
14	SENS	O	Internal status (SENSE) output to the MD mechanism controller
15	XRST	I	System reset signal input from the MD mechanism controller "L": reset
16	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller "L" is output every 13.3 msec Almost all, "H" is output
17	XTSL	I	Frequency setting terminal for the system clock "L": 45.1584 MHz, "H": 22.5792 MHz (fixed at "H" in this set)
18	DATAI	I	Digital audio signal input terminal when recording mode Not used
19	VDIOSC	O	Power supply terminal (+3.3V)
20	OSCI	I	System clock input terminal (22.57 MHz)
21	OSCO	O	System clock output terminal (22.57 MHz)
22	VSIOSC	—	Ground terminal
23	DAVSSL	—	Ground terminal
24	VREFL	O	Capacitor connecting terminal for reference voltage of internal D/A converter
25	AOUTL	O	L-ch analog audio signal output terminal
26	DAVDDL	—	Power supply terminal (+3.3V)
27	DAVDDR	—	Power supply terminal (+3.3V)
28	AOUTR	O	R-ch analog audio signal output terminal
29	VREFR	O	Capacitor connecting terminal for reference voltage of internal D/A converter
30	DAVSSR	—	Ground terminal
31	VSC1	—	Ground terminal
32	VDC1	—	Power supply terminal (+2.5V)
33	MTFLGL	O	L-ch zero-data or L-ch + R-ch zero-data detection flag output terminal Not used
34	DOUT	O	Digital audio signal output terminal when playback mode Not used
35	XINT	O	Interrupt request signal output to the MD mechanism controller
36	DADT	O	Playback data output to the D/A converter Not used
37	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the D/A converter Not used
38	XBCK	O	Bit clock signal (2.8224 MHz) output to the D/A converter Not used
39	FS256	O	256Fs = 11.2896 MHz clock signal output terminal Not used
40	VDIO1	—	Power supply terminal (+3.3V)
41 to 44	A03 to A00	O	Address signal output terminal Not used
45	A10	O	Address signal output terminal Not used
46 to 50	A04 to A08	O	Address signal output terminal Not used

Pin No.	Pin Name	I/O	Description
51	A11	O	Address signal output terminal Not used
52	VSIO1	—	Ground terminal
53	XOE	O	Output enable signal output terminal Not used
54	XCAS	O	Column address strobe signal output terminal Not used
55	A09	O	Address signal output terminal Not used
56	XRAS	O	Row address strobe signal output terminal Not used
57	XWE	O	Write enable signal output terminal Not used
58	DVDD	—	Power supply terminal (+3.3V)
59	DVSS	—	Ground terminal
60	D1/GFS	I/O	Two-way data bus or GFS output terminal Not used
61	D0/FOK	I/O	Two-way data bus or focus OK signal output terminal Not used
62, 63	D2, D3	I/O	Two-way data bus terminal Not used
64	FFDR	O	Focus servo drive PWM signal (+) output terminal
65	FRDR	O	Focus servo drive PWM signal (–) output terminal
66	MVCI	I	Digital in PLL oscillation input from the external VCO Not used
67	ADFG	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input terminal
68	VDIO2	—	Power supply terminal (+3.3V)
69	VSIO2	—	Ground terminal
70	F0CNT	O	Filter cut-off control signal output terminal Not used
71	XLRF	O	Serial data latch pulse signal output to the RF AMP
72	CKRF	O	Serial data transfer clock signal output to the RF AMP
73	DTRF	O	Two-way data bus with the RF AMP
74	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
75	LDDR	O	PWM signal output for laser automatic power control Not used
76	TRDR	O	Tracking servo drive PWM signal (–) output terminal
77	TFDR	O	Tracking servo drive PWM signal (+) output terminal
78	VDC2	—	Power supply terminal (+2.5V)
79	VSC2	—	Ground terminal
80	PEAK	I	Light amount signal (RF/ABCD) peak hold input terminal
81	BOTM	I	Light amount signal (RF/ABCD) bottom hold input terminal
82	ABCD	I	Light amount signal (ABCD) input terminal
83	FE	I	Focus error signal input terminal
84	AUX1	I	Auxiliary signal (I_3 signal/temperature signal) input terminal
85	VC	I	Middle point voltage (+1.65V) input terminal
86	ADIO	O	Monitor output of the A/D converter input signal Not used (open)
87	ADRT	I	A/D converter operational range upper limit voltage input terminal (fixed at "H" in this set)
88	AVD2	—	Power supply terminal (+3.3V)
89	AVS2	—	Ground terminal
90	ADRB	I	A/D converter operational range lower limit voltage input terminal (fixed at "L" in this set)
91	SE	I	Sled error signal input terminal
92	TE	I	Tracking error signal input terminal
93	AUX2	I	Auxiliary signal (I_3 signal/temperature signal) input terminal Not used
94	DCHG	I	Connected to the +3.3V power supply in this set
95	APC	I	Error signal input for the laser automatic power control Not used
96	DDIN	I	Connected to the +3.3V power supply in this set

Pin No.	Pin Name	I/O	Description
97	DDOUT	O	Open terminal in this set
98	ASYO	O	Playback EFM full-swing output terminal
99	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
100	AVD1	—	Power supply terminal (+3.3V)
101	BIAS	I	Playback EFM asymmetry circuit constant current input terminal
102	RFI	I	Playback EFM RF signal input terminal
103	AVS1	—	Ground terminal
104	PCO	O	Phase comparison output for master clock of the recording/playback EFM master PLL
105	FILI	I	Filter input for master clock of the recording/playback master PLL
106	FILO	O	Filter output for master clock of the recording/playback master PLL
107	CLTV	I	Internal VCO control voltage input of the recording/playback master PLL
108	VDC3	—	Power supply terminal (+2.5V)
109	VSC3	—	Ground terminal
110	FS4	O	176.4 kHz clock signal output terminal Not used
111	SRDR	O	Sled servo drive PWM signal (–) output terminal
112	SFDR	O	Sled servo drive PWM signal (+) output terminal
113	SPRD	O	Spindle servo drive PWM signal (–) output terminal
114	SPFD	O	Spindle servo drive PWM signal (+) output terminal
115	FGIN	I	FG input for spindle CAV servo Not used
116 to 118	TEST1 to TEST3	I	For test terminal
119	MTFLGR/TRK	O	R-ch zero-data detection flag output or tracking servo drive signal output terminal Not used
120	FOK	O	Focus OK signal output terminal "H": focus OK

• SERVO BOARD IC7 MB90473PFV-G-150-BNDE1 (MD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section
2	LINKOFF	O	Uni-link on/off control signal output for the SONY bus interface "L": link on
3	ERR-PWM	O	Error rate PWM output terminal Not used
4	NC	O	Not used
5	3TPWM	O	3T jitter PWM output terminal Not used
6	NC	O	Not used
7	A-ATT	O	Audio muting on/off control signal output terminal "H": muting
8	NC	O	Not used
9	VSS	—	Ground terminal
10	NC	O	Not used
11	EMPHA_0	O	MD emphasis control signal output terminal "H": emphasis on Not used
12	NC	O	Not used
13	DISC_EXIST	I	Disc detection sensor input terminal Not used
14	EJECT_OK	I	Front panel open/close detection input terminal "L": close
15	OPEN_REQ	O	Eject request signal output terminal "L": close request, "H": open request
16	SRDT	I	Reading serial data signal input from the MD DSP
17	SWDT	O	Writing serial data signal output to the MD DSP
18	SCLK	O	Serial data transfer clock signal output to the MD DSP
19	MD-LAT	O	Serial data latch pulse output to the RF amplifier and MD DSP
20	NC	O	Not used
21	VCC	—	Power supply terminal (+3.3V)
22 to 24	NC	O	Not used
25	RXD	I	Receive data input terminal for UART communication when data writing to the internal flash memory
26	TXD	O	Transmit data output terminal for UART communication when data writing to the internal flash memory
27	FLASH_W	I	Mode select terminal for data writing to the internal flash memory
28 to 32	NC	O	Not used
33	AVCC	—	Power supply terminal (+3.3V)
34	AVRH	I	Reference voltage input for the internal A/D converter
35	AVSS	—	Ground terminal
36 to 39	NC	O	Not used
40	VSS	—	Ground terminal
41	REF_LEVEL	I	Light amount signal (ABCD) input terminal
42 to 45	NC	O	Not used
46	CC-XINT	I	Interrupt status input from the MD DSP
47 to 49	MD0 to MD2	—	Setting terminal for the CPU operational mode
50	BUS_ON	I	SONY bus on/off control signal input terminal "L": bus on
51	BU_IN	I	Back up power supply detection signal input terminal "L" is input at low voltage
52	SQ_SY	I	Subcode Q sync (SCOR) input from the MD DSP "L" is input every 13.3 msec Almost all, "H" is input
53	DISC-IN	I	Disc loading detection switch input terminal "L": loading
54, 55	NC	O	Not used
56	UNISI	I	Serial data input from the SONY bus interface IC
57	UNISO	O	Serial data output to the SONY bus interface IC
58	UNICLK	I	Serial data transfer clock signal input from the system controller
59	NC	O	Not used
60	ADER-PWM	O	ADIP error PWM output terminal Not used
61 to 68	NC	O	For test terminal Not used
69	MDMON_CHECK	I	Power supply detection of MD mechanism deck section (MDMON)
70	MDON_CHECK	I	Power supply detection of servo section (MDON)
71 to 74	NC	O	Not used
75	RSTX	I	System reset signal input from the reset signal generator and reset switch "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
76	NC	O	Not used
77	XIA	I	System clock input terminal Not used
78	XOA	O	System clock output terminal Not used
79	VSS	—	Ground terminal
80	X0	I	System clock input terminal (18.43 MHz)
81	X1	O	System clock output terminal (18.43 MHz)
82	VCC	—	Power supply terminal (+3.3V)
83	NC	O	Not used
84	EJECT	O	Loading motor control signal output terminal (eject direction)
85	LOAD	O	Loading motor control signal output terminal (loading direction)
86	NC	O	Not used
87	LIMIT_IN	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when "L"
88	LOAD_END	I	Chucking completed detection switch input terminal "L": chucking completion
89	INIT1	I	Analog/digital model setting terminal "L": digital Not used
90, 91	INIT2, INIT3	I	Digital word size setting terminal Not used
92	NC	O	Not used
93	MD_ON	O	Power supply on/off control signal output of the servo section "H": power on
94	MD_RST	O	System reset signal output to the servo section
95	SENS	I	Internal status (SENS) input from the MD DSP
96	NC	O	Not used
97	NC	I	Not used
98	MNT2	I	Monitor signal input from the MD DSP (for reserve terminal)
99	NC	O	Not used
100	FOK	I	Focus OK signal input terminal "H": focus OK

- **MAIN BOARD IC600 MN101E01KDA1 (SYSTEM CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1	DAVDD	—	Power supply terminal (+3.3V)
2	NCO	O	Not used
3	DAVSS	—	Ground terminal
4 to 9	NCO	O	Not used
10	VDD1	—	Power supply terminal (+3.3V)
11	MMOD	I	Internal flash memory data write mode detection signal input terminal Not used
12	OSCOUT	O	System clock output terminal (27.648 MHz)
13	OSCIN	I	System clock input terminal (27.648 MHz)
14	VSS1	—	Ground terminal
15	XIN	I	System clock input terminal (32.768 kHz)
16	XOUT	O	System clock output terminal (32.768 kHz)
17	VDD2	—	Power supply terminal (+3.3V)
18	MOD1	I	Setting terminal for the CPU operational mode fixed at “H”
19	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator and reset switch “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
20	RCIN1	I	Rotary remote commander shift key input terminal
21	$\overline{\text{ACCIN}}$	I	Accessory power detection signal input terminal “L”: accessory power on
22	$\overline{\text{TESTIN}}$	I	Test mode setting terminal “L”: test mode, normally fixed at “H”
23	TELLATT	I	Telephone muting detection signal input terminal At input of “H”, the audio signal is attenuated by 20 dB
24	ATT	O	Audio muting on/off control signal output terminal
25	$\overline{\text{ADON}}$	O	A/D converter power control signal output When the KEY ACK (pin 27) that controls reference voltage power for key A/D conversion input is active, “L” is output from this terminal to enable the input
26	NCO	—	Not used
27	KEYACK	I	Acknowledge signal (wake up signal) input terminal for the key entry Acknowledge signal is input to accept any function key in the standby status On at input of “H”
28	TUATTIN	I	Tuner muting zero-cross detection signal input terminal
29	MDON	I	Power supply on/off control signal input of the servo section
30	MDMON	I	Power supply on/off control signal input of the MD mechanism deck section
31	BUIN	I	Back up power supply detection signal input terminal “L” is input at low voltage
32	NCO	O	Not used
33	UNISO	O	Serial data output to the SONY bus interface IC
34	UNISI	I	Serial data input from the SONY bus interface IC
35	UNICKO	O	Serial data transfer clock signal output to the SONY bus interface IC and MD mechanism controller
36 to 38	NCO	O	Not used
39	OPENREQ	O	Front panel open request signal output terminal Not used
40	$\overline{\text{BUSON}}$	O	SONY bus on/off control signal output terminal “L”: bus on
41	MDBOOT	O	Internal flash memory data write control signal output terminal Not used
42	$\overline{\text{SYSRST}}$	O	System reset signal output to the MD mechanism controller and SONY bus interface IC
43 to 50	NCO	O	Not used
51	AMPATT	O	Amplifier muting on/off control signal output terminal Not used
52	DEST1	I	Setting terminal for the destination
53, 54	DEST2, DEST3	I	Setting terminal for model discrimination Not used
55	$\overline{\text{DOORSW}}$	I	Front panel open/close detection input terminal “L”: close
56	DIAG	I	DIAG signal input from the power amplifier
57	$\overline{\text{VOLATT}}$	O	Muting on/off control signal output to the electrical volume
58	NCO (AUX)	O	Not used
59	$\overline{\text{NOSESW}}$	I	Front panel remove/attach detection signal input terminal “L”: front panel is attached
60 to 62	NCO	O	Not used
63	VSS2	O	Ground terminal
64	TUATT	O	Tuner muting on/off control signal output terminal
65	NCO (TUON)	O	Not used
66	NSMASK	O	Discharge control signal output for the noise detection circuit “H”: discharge
67	E2P_CKO	O	Serial data transfer clock signal output to the EEPROM in tuner unit
68	E2P_SIO	I/O	Two-way data bus with the EEPROM in tuner unit
69	DOORIND	O	Illumination LED drive signal output of the sub panel
70	$\overline{\text{AMPSTB}}$	O	Standby on/off control signal output to the power amplifier
71 to 75	NCO	O	Not used
76	LCDSO	O	Serial data output to the LCD controller
77	LCDCE	O	Chip enable signal output to the LCD controller
78	LCDCKO	O	Serial data transfer clock signal output to the LCD controller
79	I2C_SIO	I/O	IIC two-way data bus with the tuner unit, electrical volume and power amplifier
80	NCO	O	Not used
81	I2C_CKO	O	IIC bus clock signal output to the tuner unit, electrical volume and power amplifier
82	DAVN	I	Data transmit completed detection signal input terminal
83	SIRCS	I	SIRCS signal input terminal
84	NCO	O	Not used
85	BEEP	O	Beep sound drive signal output terminal
86 to 88	NCO	O	Not used
89	VDD3	—	Power supply terminal (+5V)
90	NCO	O	Not used
91	VSS3	—	Ground terminal
92	QUALITY	I	Noise level detection signal input at SEEK mode (A/D input)
93	VSM	I	FM and AM signal-meter voltage detection signal input from the tuner unit (A/D input)
94	KEYIN1	I	Front panel key input terminal (A/D input)
95	KEYIN0	I	Front panel key input terminal (A/D input)
96	RCIN0	I	Rotary remote commander key input terminal (A/D input)
97 to 99	NCO	O	Not used
100	VREF+	I	Reference voltage (+5V) input terminal

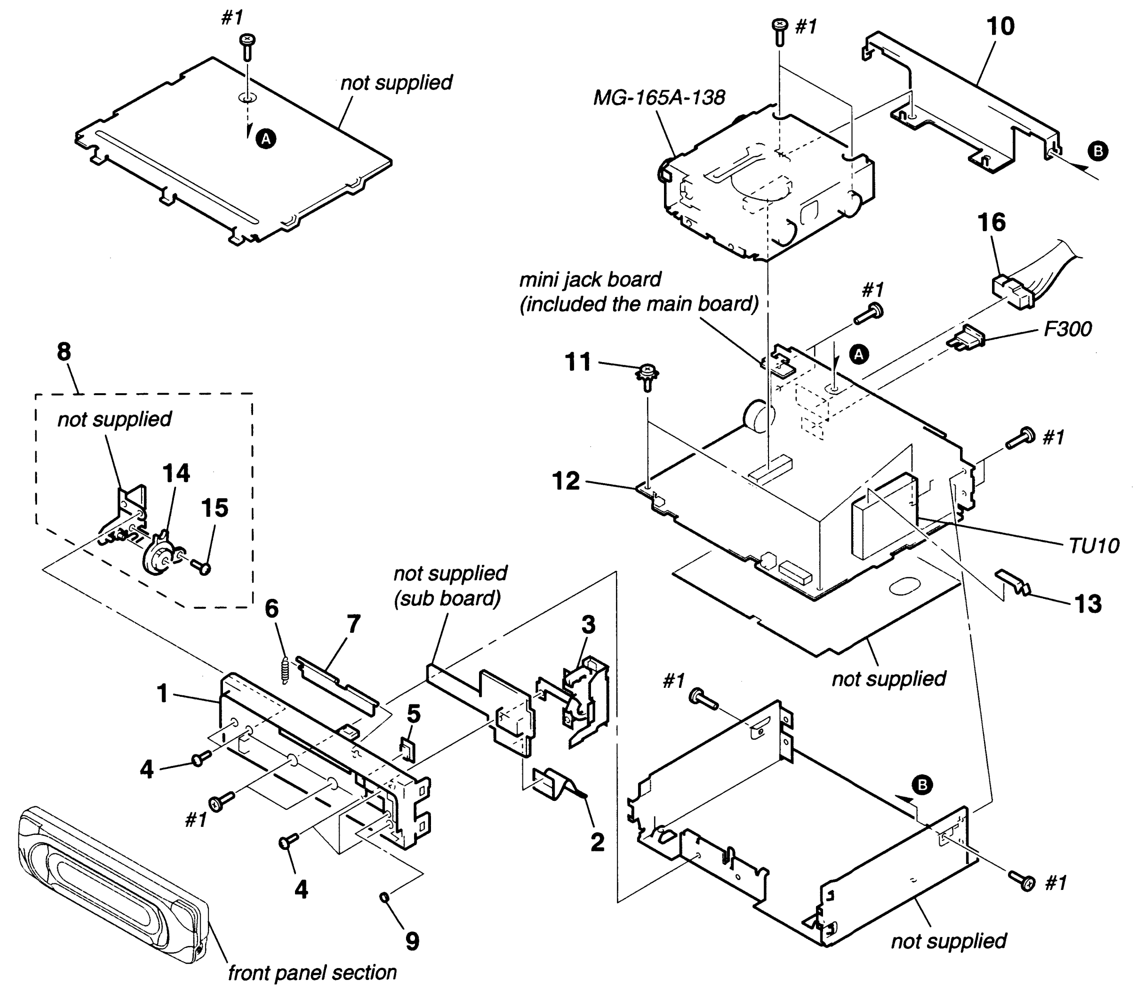
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

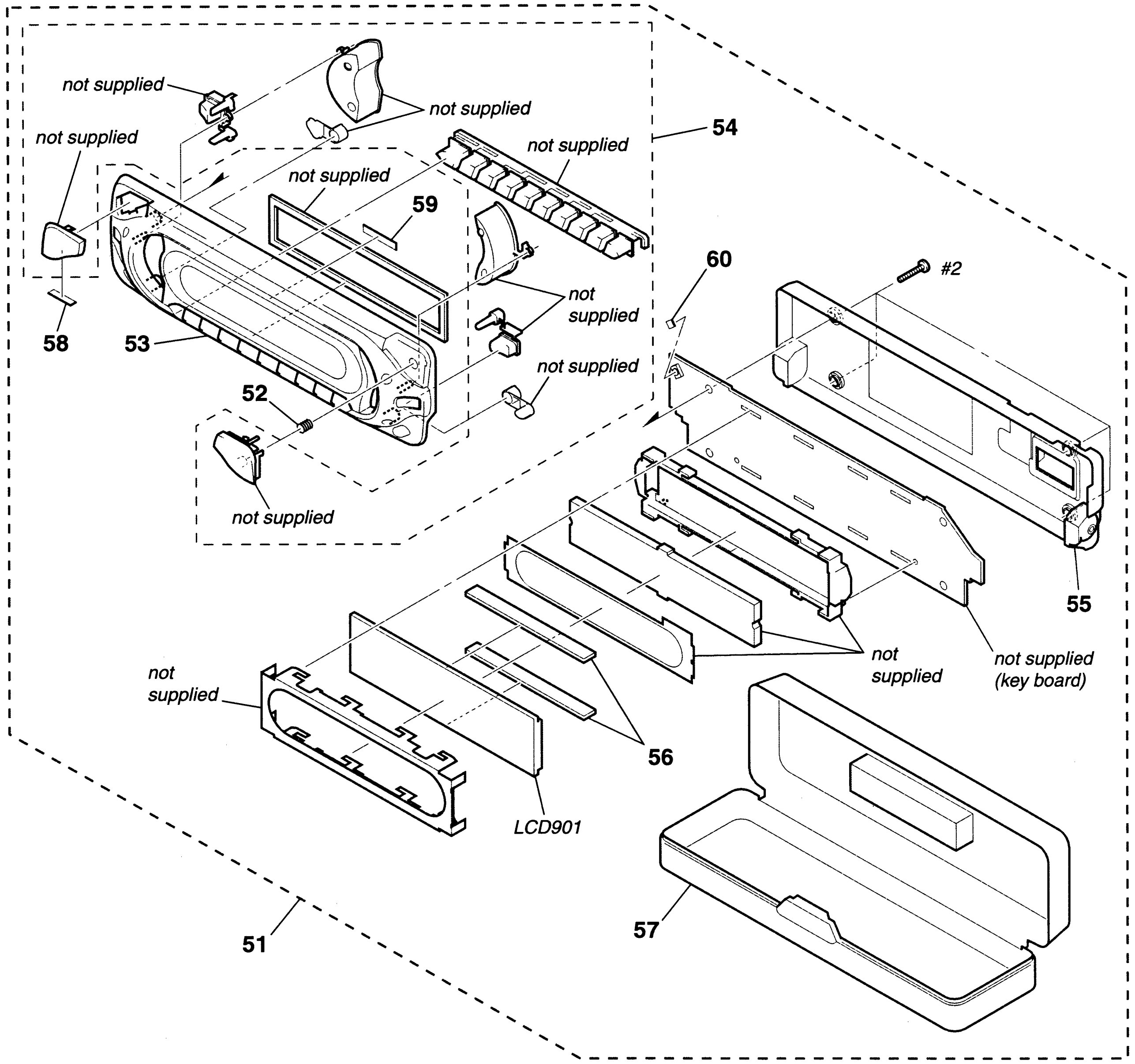
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS SECTION


#1
not supplied
A
MG-165A-138
#1
10
B
16
mini jack board
(included the main board)
#1
F300
A
8
not supplied
14
15
11
12
#1
TU10
13
not supplied
(sub board)
6
7
3
1
5
#1
not supplied
4
#1
B
#1
2
4
9
#1
not supplied
front panel section

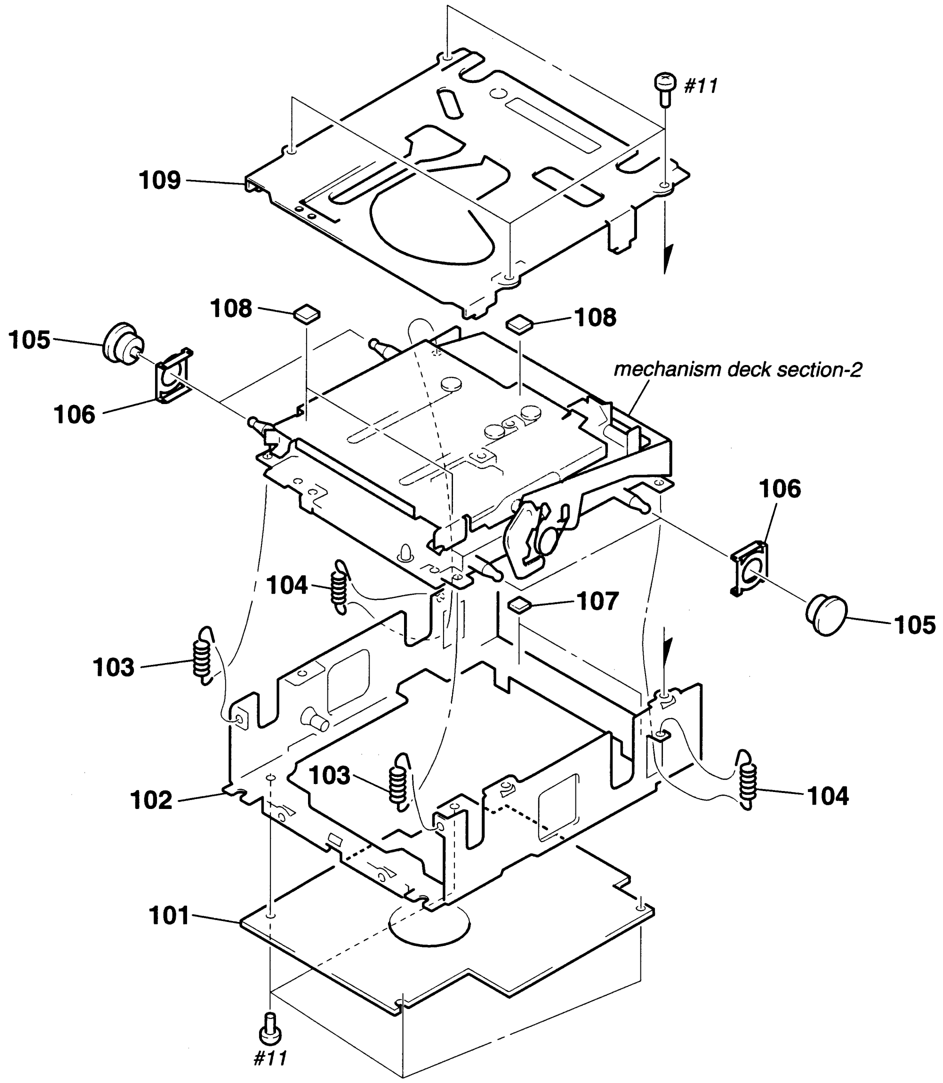
Ref. No.	Part No.	Description	Remark
1	X-3382-791-1	PANEL ASSY, SUB	
2	1-792-195-11	CABLE, FLEXIBLE FLAT (14CORE)	
3	X-3381-381-3	LOCK ASSY	
4	3-042-244-01	SCREW (T)	
5	3-040-990-01	BUTTON (EJECT) (⏏)	
6	3-034-086-01	SPRING (DOOR)	
7	3-033-750-03	DOOR (MD)	
8	X-3376-699-6	GEAR ASSY	
9	3-243-177-01	CUSHION (SUB PANEL)	
10	3-248-458-01	BRACKET (MD)	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
12	A-3274-719-A	MAIN BOARD, COMPLETE (Including the MINI JACK board)	
13	3-246-481-01	PLATE (TU), GROUND	
14	3-030-909-03	DAMPER, OIL	
15	3-713-786-51	SCREW (M2X3)	
16	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
F300	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)	
TU10	A-3220-887-A	TUNER UNIT (TUX-030//Q)	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	

6-2. FRONT PANEL SECTION


not supplied
not supplied
not supplied
not supplied
54
not supplied
59
60
#2
not
supplied
58
53
not supplied
52
not supplied
55
not
supplied
not supplied
(key board)
not
supplied
56
LCD901
57
51

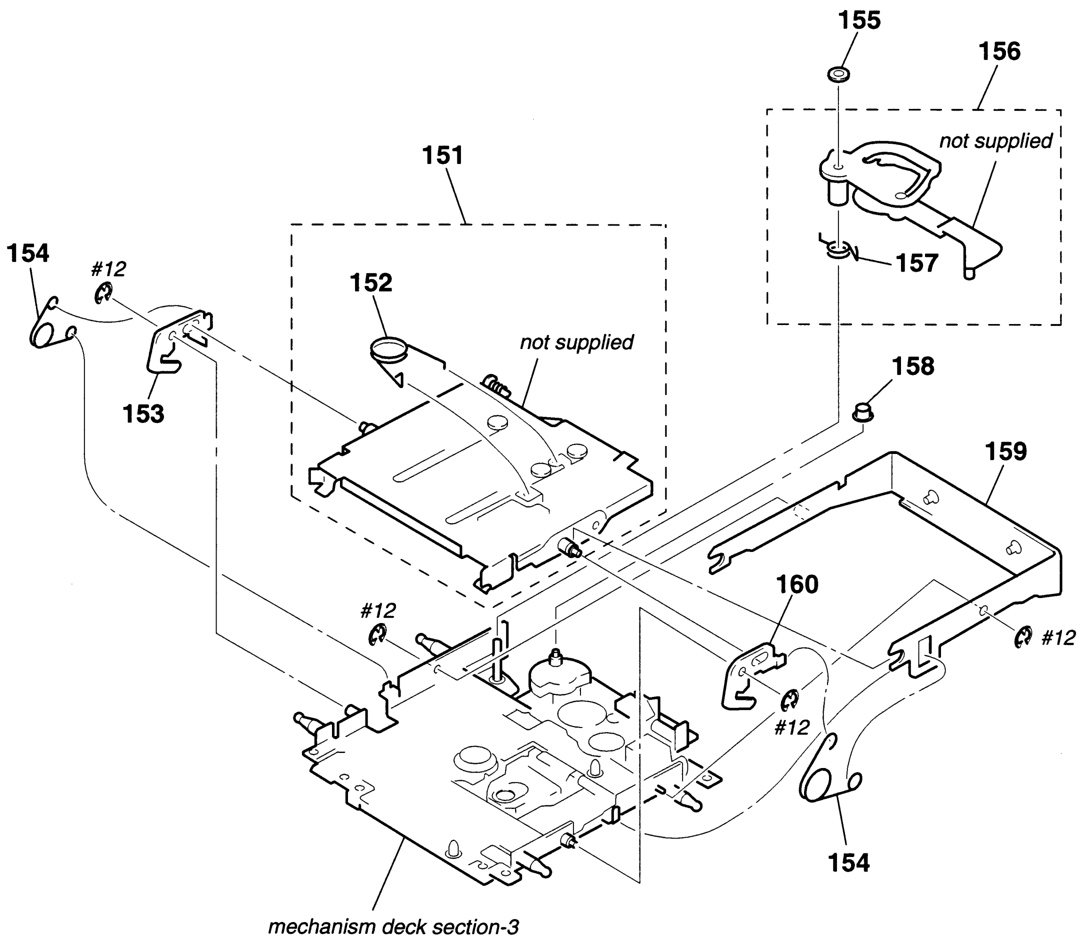
Ref. No.	Part No.	Description	Remark
51	A-3337-390-A	PANEL COMPLETE ASSY, FRONT	
52	3-246-778-01	SPRING (OPEN)	
53	X-3383-115-1	PANEL (SV) ASSY, FRONT	
54	X-3383-105-6	BUTTON ASSY (S)	
55	X-3382-702-3	PANEL ASSY, FRONT BACK	
56	1-694-976-11	CONDUCTIVE BOARD, CONNECTION	
57	X-3383-264-2	CASE ASSY	
58	3-253-597-01	SHEET (S)	
59	3-252-202-01	SHEET (ESD)	
* 60	3-014-602-01	SPACER (A)	
LCD901	1-805-076-11	DISPLAY PANEL, LIQUID CRYSTAL	
#2	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	

6-3. MECHANISM DECK SECTION-1
(MG-165A-138)


109
#11
108
108
105
106
mechanism deck section-2
106
104
107
105
103
103
104
102
101
#11

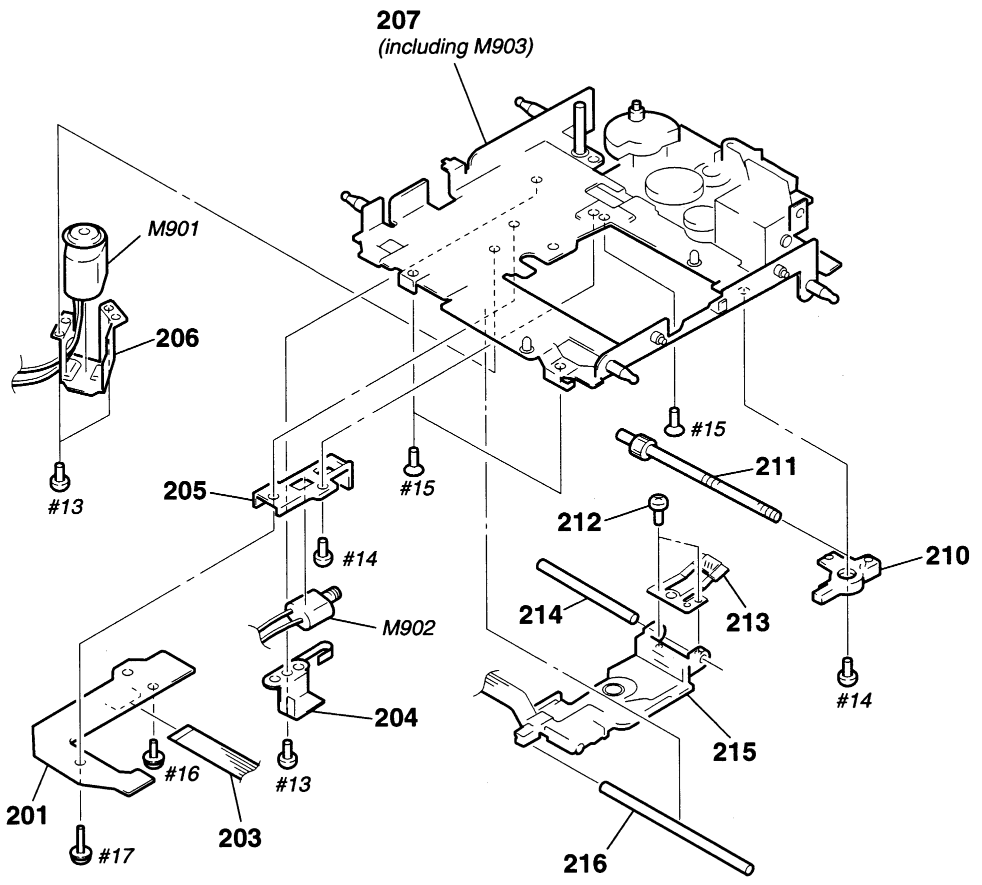
Ref. No.	Part No.	Description	Remark
101	A-3274-602-A	SERVO BOARD, COMPLETE	
* 102	X-3379-367-2	CHASSIS ASSY, MD	
103	3-032-714-02	SPRING (FLOAT F), TENSION	
104	3-921-111-01	SPRING (FL2), TENSION	
105	3-931-897-61	DAMPER (T)	
* 106	3-220-096-02	BRACKET (DAMPER)	
* 107	3-034-301-01	CUSHION (EJ2)	
* 108	3-034-302-01	CUSHION (EJ3)	
* 109	X-3379-368-1	COVER ASSY, MD	
#11	7-685-851-04	SCREW +BVTT 2X4 (S)	

6-4. MECHANISM DECK SECTION-2
(MG-165A-138)


155
156
not supplied
151
154
#12
152
not supplied
157
153
158
159
#12
160
#12
#12
154
mechanism deck section-3

Ref. No.	Part No.	Description	Remark
* 151	X-3381-040-1	HOLDER ASSY	
152	3-032-682-01	SPRING (HOLDER)	
* 153	3-032-712-01	LEVER (LOCK R)	
154	3-919-281-01	SPRING (CHKG)	
155	3-035-932-01	WASHER, STOPPER	
* 156	X-3379-362-3	LEVER (LE23) ASSY	
157	3-032-707-01	SPRING (LEVER LE)	
158	3-925-034-01	ROLLER (GLE)	
* 159	X-3376-798-2	ARM ASSY, CHUCKING	
* 160	3-032-711-01	LEVER (LOCK L)	
#12	7-624-102-04	STOP RING 1.5, TYPE-E	

6-5. MECHANISM DECK SECTION-3 (MG-165A-138)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
201	A-3274-600-A	SENSOR BOARD, COMPLETE	
203	1-827-113-11	WIRE, PARALLEL (FFC) (10 CORE)	
* 204	3-919-283-01	BRACKET (SL)	
* 205	3-032-704-02	BASE (SL)	
* 206	3-919-297-01	RETAINER (SP)	
207	A-3315-218-C	CHASSIS (OP) ASSY	
* 210	3-032-705-01	BEARING (SL)	
211	X-3373-213-1	SCREW ASSY, FEED	
212	3-939-590-07	SCREW (IB LOCK)	
213	3-026-082-11	SPRING (SL OUTSERT), FEED	
* 214	3-919-293-01	SHAFT (SL)	
⚠215	8-583-116-03	OPTICAL PICK-UP KMS-242E/Q-RP	
* 216	3-920-537-01	SHAFT (SL2)	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
#13	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE 3	
#14	7-621-772-08	SCREW +B 2X3	
#15	7-621-555-10	SCREW +K 2X3	
#16	7-628-253-00	SCREW +PS 2X4	
#17	7-628-253-35	SCREW +PS 2X8	

KEY

SECTION 7
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD **********	
	1-694-976-11	CONDUCTIVE BOARD, CONNECTION	
*	3-014-602-01	SPACER (A)	
		< CAPACITOR >	
C971	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C981	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C982	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C983	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C984	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C985	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C986	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
		< CONNECTOR >	
CN901	1-817-158-21	PLUG, CONNECTOR 14P	
		< DIODE >	
D901	8-719-085-72	DIODE UMZ6.8ENTR	
D902	8-719-083-66	DIODE UDZSTE-1718B	
D981	8-719-069-54	DIODE UDZSTE-175.1B	
D983	8-719-404-50	DIODE MA111-TX	
		< IC >	
IC901	8-759-826-21	IC LC75874W	
IC971	6-600-163-01	IC RS-770	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-805-076-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< LED >	
LED903	6-500-450-01	DIODE CL-195SR-CD-T (KEY ILLUMINATION)	
LED911	6-500-450-01	DIODE CL-195SR-CD-T (KEY ILLUMINATION)	
LED933	6-500-459-01	DIODE NSCW505T-ARS (LCD BACK LIGHT)	
LED934	6-500-459-01	DIODE NSCW505T-ARS (LCD BACK LIGHT)	
LED951	6-500-450-01	DIODE CL-195SR-CD-T (KEY ILLUMINATION)	
LED952	6-500-450-01	DIODE CL-195SR-CD-T (KEY ILLUMINATION)	
LED953	6-500-450-01	DIODE CL-195SR-CD-T (KEY ILLUMINATION)	
LED954	6-500-450-01	DIODE CL-195SR-CD-T (KEY ILLUMINATION)	
		< SWITCH >	
LSW901	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SEL)	
LSW905	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (+ (VOLUME))	
LSW906	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (– (VOLUME))	
LSW907	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (ATT)	
LSW908	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MODE)	
LSW909	1-771-883-31	SWITCH, TACTILE (WITH LED) (AF)	
LSW910	1-771-883-31	SWITCH, TACTILE (WITH LED) (BTM, SENS)	
LSW912	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW913	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SEEK +, ▶▶I ▶▶)	
LSW914	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SEEK –, I◀◀ ◀◀)	
LSW915	1-771-883-31	SWITCH, TACTILE (WITH LED) (TA)	
LSW916	1-771-883-31	SWITCH, TACTILE (WITH LED) (LIST, PTY)	
LSW917	1-771-883-31	SWITCH, TACTILE (WITH LED) (GP/ALBM +, 6)	
LSW918	1-771-883-31	SWITCH, TACTILE (WITH LED) (GP/ALBM –, 5)	
LSW919	1-771-883-31	SWITCH, TACTILE (WITH LED) (SHUF, 4)	
LSW920	1-771-883-31	SWITCH, TACTILE (WITH LED) (REP, 3)	
LSW921	1-771-883-31	SWITCH, TACTILE (WITH LED) (DISC +, 2)	
LSW922	1-771-883-31	SWITCH, TACTILE (WITH LED) (DISC –, 1)	
		< RESISTOR >	
R901	1-216-819-11	METAL CHIP 680 5% 1/10W	
R902	1-216-819-11	METAL CHIP 680 5% 1/10W	
R903	1-216-819-11	METAL CHIP 680 5% 1/10W	
R904	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R905	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	
R906	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	
R907	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R908	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R909	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R910	1-218-867-11	METAL CHIP 6.8K 5% 1/10W	
R911	1-216-819-11	METAL CHIP 680 5% 1/10W	
R912	1-216-819-11	METAL CHIP 680 5% 1/10W	
R913	1-216-819-11	METAL CHIP 680 5% 1/10W	
R914	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R915	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	
R916	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	
R917	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R918	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R919	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R920	1-218-867-11	METAL CHIP 6.8K 5% 1/10W	

KEY **MAIN**

Ref. No.	Part No.	Description			Remark
R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R927	1-216-025-11	RES-CHIP	100	5%	1/10W
R928	1-216-021-00	METAL CHIP	68	5%	1/10W
R929	1-216-017-00	RES-CHIP	47	5%	1/10W
R930	1-216-017-00	RES-CHIP	47	5%	1/10W
R931	1-216-041-00	METAL CHIP	470	5%	1/10W
R934	1-216-017-00	RES-CHIP	47	5%	1/10W
R935	1-216-025-11	RES-CHIP	100	5%	1/10W
R936	1-216-021-00	METAL CHIP	68	5%	1/10W
R941	1-216-025-11	RES-CHIP	100	5%	1/10W
R942	1-216-021-00	METAL CHIP	68	5%	1/10W
R946	1-216-025-11	RES-CHIP	100	5%	1/10W
R947	1-216-021-00	METAL CHIP	68	5%	1/10W
R950	1-216-025-11	RES-CHIP	100	5%	1/10W
R951	1-216-021-00	METAL CHIP	68	5%	1/10W
R960	1-216-025-11	RES-CHIP	100	5%	1/10W
R961	1-216-025-11	RES-CHIP	100	5%	1/10W
R962	1-216-029-11	RES-CHIP	150	5%	1/10W
R966	1-216-025-11	RES-CHIP	100	5%	1/10W
R967	1-216-037-00	METAL CHIP	330	5%	1/10W
R970	1-216-864-11	METAL CHIP	0	5%	1/10W
R971	1-216-821-11	METAL CHIP	1K	5%	1/10W
R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R975	1-216-817-11	METAL CHIP	470	5%	1/10W
R976	1-216-817-11	METAL CHIP	470	5%	1/10W
R977	1-216-817-11	METAL CHIP	470	5%	1/10W
R978	1-216-817-11	METAL CHIP	470	5%	1/10W
R979	1-216-817-11	METAL CHIP	470	5%	1/10W
R980	1-216-817-11	METAL CHIP	470	5%	1/10W
R981	1-216-811-11	METAL CHIP	150	5%	1/10W
R982	1-216-811-11	METAL CHIP	150	5%	1/10W
R983	1-216-811-11	METAL CHIP	150	5%	1/10W
R985	1-216-864-11	METAL CHIP	0	5%	1/10W
R986	1-216-821-11	METAL CHIP	1K	5%	1/10W
R987	1-216-821-11	METAL CHIP	1K	5%	1/10W
R988	1-216-821-11	METAL CHIP	1K	5%	1/10W
R989	1-216-840-11	METAL CHIP	39K	5%	1/10W
R990	1-216-857-11	METAL CHIP	1M	5%	1/10W
		< SWITCH >			
S902	1-771-884-31	SWITCH, TACTILE (WITH LED) (SOURCE)			
S903	1-771-884-31	SWITCH, TACTILE (WITH LED) (DSO)			
S911	1-771-884-31	SWITCH, TACTILE (WITH LED) (EQ3)			
***					
	A-3274-719-A	MAIN BOARD, COMPLETE *********************			
					(Including the MINI JACK board)
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C10	1-124-259-11	ELECT	4.7uF	20%	16V
C11	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C12	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C13	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C14	1-124-584-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remark
C15	1-124-584-00	ELECT	100uF	20%	10V
C16	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C17	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C18	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C60	1-115-156-11	CERAMIC CHIP	1uF		10V
C61	1-115-156-11	CERAMIC CHIP	1uF		10V
C91	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C92	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C93	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C94	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C96	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C97	1-135-834-11	CERAMIC CHIP	2.2uF		6.3V
C98	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C99	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C100	1-124-589-11	ELECT	47uF	20%	16V
C120	1-128-428-11	ELECT	10uF	20%	35V
C121	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C122	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C125	1-104-942-11	ELECT	1uF	20%	50V
C126	1-104-942-11	ELECT	1uF	20%	50V
C127	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C128	1-136-154-00	FILM	0.012uF	5%	50V
C129	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C130	1-136-154-00	FILM	0.012uF	5%	50V
C131	1-124-589-11	ELECT	47uF	20%	16V
C132	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C135	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C136	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C210	1-104-942-11	ELECT	1uF	20%	50V
C211	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C220	1-104-942-11	ELECT	1uF	20%	50V
C221	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C241	1-128-428-11	ELECT	10uF	20%	35V
C245	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C246	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C247	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C251	1-128-428-11	ELECT	10uF	20%	35V
C255	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C256	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C257	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C261	1-128-428-11	ELECT	10uF	20%	35V
C265	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C266	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C267	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C271	1-128-428-11	ELECT	10uF	20%	35V
C275	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C276	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C277	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C300	1-124-234-00	ELECT	22uF	20%	16V
C301	1-126-160-11	ELECT	1uF	20%	50V
C302	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C303	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C304	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C305	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C306	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C307	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C320	1-124-584-00	ELECT	100uF	20%	10V
C321	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

MAIN

Ref. No.	Part No.	Description			Remark
C322	1-124-234-00	ELECT	22uF	20%	16V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-124-234-00	ELECT	22uF	20%	16V
C325	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C326	1-124-234-00	ELECT	22uF	20%	16V
C327	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C328	1-124-589-11	ELECT	47uF	20%	16V
C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C330	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C331	1-135-473-21	ELECT	3300uF	20%	16V
C332	1-124-589-11	ELECT	47uF	20%	16V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C345	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C350	1-124-589-11	ELECT	47uF	20%	16V
C360	1-126-160-11	ELECT	1uF	20%	50V
C374	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C380	1-115-156-11	CERAMIC CHIP	1uF		10V
C400	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C401	1-126-935-11	ELECT	470uF	20%	16V
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C500	1-115-156-11	CERAMIC CHIP	1uF		10V
C501	1-115-156-11	CERAMIC CHIP	1uF		10V
C502	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C504	1-124-589-11	ELECT	47uF	20%	16V
C505	1-124-584-00	ELECT	100uF	20%	10V
C506	1-124-589-11	ELECT	47uF	20%	16V
C507	1-124-589-11	ELECT	47uF	20%	16V
C600	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C601	1-124-584-00	ELECT	100uF	20%	10V
C602	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C603	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C604	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C605	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C606	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C607	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C608	1-124-589-11	ELECT	47uF	20%	16V
C609	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C610	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C611	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C612	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C613	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C614	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C615	1-124-589-11	ELECT	47uF	20%	16V
C616	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C620	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C640	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C700	1-115-156-11	CERAMIC CHIP	1uF		10V
C701	1-124-233-11	ELECT	10uF	20%	16V
C702	1-115-156-11	CERAMIC CHIP	1uF		10V
C804	1-162-965-11	CERAMIC CHIP	1500PF	10%	50V
		< CONNECTOR >			
CN300	1-774-701-21	PIN, CONNECTOR 16P			
CN370	1-784-456-11	CONNECTOR, FFC/FPC 14P			
CNJ400	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CNP500	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D60	8-719-069-55	DIODE UDZSTE-175.6B			
D72	8-719-069-54	DIODE UDZSTE-175.1B			
D300	8-719-970-02	DIODE 1SR139-400T-32			
D301	8-719-970-02	DIODE 1SR139-400T-32			
D302	8-719-970-02	DIODE 1SR139-400T-32			
D303	8-719-970-02	DIODE 1SR139-400T-32			
D304	8-719-970-02	DIODE 1SR139-400T-32			
D305	8-719-970-02	DIODE 1SR139-400T-32			
D306	8-719-970-02	DIODE 1SR139-400T-32			
D307	8-719-970-02	DIODE 1SR139-400T-32			
D308	8-719-970-02	DIODE 1SR139-400T-32			
D309	8-719-970-02	DIODE 1SR139-400T-32			
D310	8-719-970-02	DIODE 1SR139-400T-32			
D311	8-719-970-02	DIODE 1SR139-400T-32			
D312	8-719-049-38	DIODE 1N5404TU			
D313	8-719-069-57	DIODE UDZSTE-176.8B			
D350	8-719-040-04	DIODE MA721WK- (TX)			
D351	8-719-404-50	DIODE MA111-TX			
D360	8-719-083-66	DIODE UDZSTE-1718B			
D363	8-719-083-66	DIODE UDZSTE-1718B			
D370	8-719-078-81	DIODE DF5A6.8FU (TE85R)			
D371	8-719-083-66	DIODE UDZSTE-1718B			
D372	8-719-083-66	DIODE UDZSTE-1718B			
D373	8-719-078-81	DIODE DF5A6.8FU (TE85R)			
D375	8-719-404-50	DIODE MA111-TX			
D401	8-719-083-66	DIODE UDZSTE-1718B			
D402	8-719-072-70	DIODE MA2ZD14001S0			
D403	8-719-083-66	DIODE UDZSTE-1718B			
D404	8-719-404-50	DIODE MA111-TX			
D405	8-719-040-04	DIODE MA721WK- (TX)			
D406	8-719-056-84	DIODE UDZSTE-177.5B			
D407	8-719-083-66	DIODE UDZSTE-1718B			
D500	8-719-041-79	DIODE MA721WA-TX			
D501	8-719-069-55	DIODE UDZSTE-175.6B			
D600	8-719-400-20	DIODE MA152WA			
D700	8-719-081-33	DIODE MA2YD1500LS0			
D701	8-719-081-33	DIODE MA2YD1500LS0			
		< IC >			
IC90	6-703-809-01	IC SAA6588T/V2-518			
IC120	6-703-304-01	IC BD3802F-FE2			
IC300	6-703-814-01	IC TDA8588AJ/N1			
IC400	6-703-884-01	IC BA8271F-E2			
IC600	6-802-789-02	IC MN101E01KDA1			
IC601	8-759-659-13	IC PST3428UL			
IC700	8-759-486-56	IC NJM2370U36-TE2			
		< JACK >			
J10	1-815-185-12	JACK (ANT) (FM/AM ANTENNA IN)			
		< SHORT >			
JC17	1-216-864-11	METAL CHIP	0	5%	1/10W
JC60	1-216-864-11	METAL CHIP	0	5%	1/10W
JC80	1-216-864-11	METAL CHIP	0	5%	1/10W
JC140	1-216-296-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
JC141	1-216-864-11	METAL CHIP	0	5%	1/10W
JC142	1-216-864-11	METAL CHIP	0	5%	1/10W
JC300	1-216-296-11	SHORT CHIP	0		
JC301	1-216-864-11	METAL CHIP	0	5%	1/10W
JC305	1-216-296-11	SHORT CHIP	0		
JC306	1-216-296-11	SHORT CHIP	0		
JC350	1-216-296-11	SHORT CHIP	0		
JC361	1-216-296-11	SHORT CHIP	0		
JC362	1-216-864-11	METAL CHIP	0	5%	1/10W
JC380	1-216-864-11	METAL CHIP	0	5%	1/10W
JC403	1-216-864-11	METAL CHIP	0	5%	1/10W
JC404	1-216-296-11	SHORT CHIP	0		
JC405	1-216-864-11	METAL CHIP	0	5%	1/10W
JC406	1-216-296-11	SHORT CHIP	0		
JC407	1-216-296-11	SHORT CHIP	0		
JC420	1-216-296-11	SHORT CHIP	0		
JC421	1-216-296-11	SHORT CHIP	0		
JC504	1-216-296-11	SHORT CHIP	0		
JC610	1-216-296-11	SHORT CHIP	0		
JC611	1-216-296-11	SHORT CHIP	0		
		< COIL >			
L300	1-456-227-11	COIL, CHOKE	250uH		
L320	1-469-844-11	INDUCTOR	2.2uH		
L328	1-469-844-11	INDUCTOR	2.2uH		
		< JACK >			
PJ210	1-774-700-11	JACK, PIN 6P (AUDIO OUT FRONT/REAR, BUS AUDIO IN)			
		< TRANSISTOR >			
Q60	8-729-920-85	TRANSISTOR	2SD1664-T101-QR		
Q71	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q210	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q220	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q230	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q240	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q350	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q351	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q360	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q361	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q370	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q401	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q402	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q403	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q404	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q405	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q504	8-729-920-85	TRANSISTOR	2SD1664-T101-QR		
Q505	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q600	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
		< RESISTOR/FERRITE >			
R10	1-216-837-11	METAL CHIP	22K	5%	1/10W
R11	1-216-837-11	METAL CHIP	22K	5%	1/10W
R12	1-216-809-11	METAL CHIP	100	5%	1/10W
R13	1-216-809-11	METAL CHIP	100	5%	1/10W
R14	1-216-809-11	METAL CHIP	100	5%	1/10W
R15	1-216-809-11	METAL CHIP	100	5%	1/10W
R16	1-216-821-11	METAL CHIP	1K	5%	1/10W
R17	1-216-833-11	METAL CHIP	10K	5%	1/10W
R18	1-216-864-11	METAL CHIP	0	5%	1/10W
R19	1-216-797-11	METAL CHIP	10	5%	1/10W
R20	1-216-864-11	METAL CHIP	0	5%	1/10W
R61	1-216-817-11	METAL CHIP	470	5%	1/10W
R79	1-216-809-11	METAL CHIP	100	5%	1/10W
R91	1-216-837-11	METAL CHIP	22K	5%	1/10W
R92	1-216-797-11	METAL CHIP	10	5%	1/10W
R93	1-216-817-11	METAL CHIP	470	5%	1/10W
R94	1-216-797-11	METAL CHIP	10	5%	1/10W
R95	1-216-809-11	METAL CHIP	100	5%	1/10W
R96	1-216-809-11	METAL CHIP	100	5%	1/10W
R120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R121	1-216-833-11	METAL CHIP	10K	5%	1/10W
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-218-882-11	METAL CHIP	30K	0.5%	1/10W
R125	1-216-864-11	METAL CHIP	0	5%	1/10W
R140	1-216-809-11	METAL CHIP	100	5%	1/10W
R141	1-216-809-11	METAL CHIP	100	5%	1/10W
R210	1-216-833-11	METAL CHIP	10K	5%	1/10W
R211	1-216-821-11	METAL CHIP	1K	5%	1/10W
R220	1-216-833-11	METAL CHIP	10K	5%	1/10W
R221	1-216-821-11	METAL CHIP	1K	5%	1/10W
R240	1-216-809-11	METAL CHIP	100	5%	1/10W
R241	1-216-809-11	METAL CHIP	100	5%	1/10W
R242	1-216-841-11	METAL CHIP	47K	5%	1/10W
R243	1-216-821-11	METAL CHIP	1K	5%	1/10W
R250	1-216-809-11	METAL CHIP	100	5%	1/10W
R251	1-216-809-11	METAL CHIP	100	5%	1/10W
R252	1-216-841-11	METAL CHIP	47K	5%	1/10W
R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R260	1-216-809-11	METAL CHIP	100	5%	1/10W
R261	1-216-809-11	METAL CHIP	100	5%	1/10W
R262	1-216-841-11	METAL CHIP	47K	5%	1/10W
R263	1-216-821-11	METAL CHIP	1K	5%	1/10W
R270	1-216-809-11	METAL CHIP	100	5%	1/10W
R271	1-216-809-11	METAL CHIP	100	5%	1/10W
R272	1-216-841-11	METAL CHIP	47K	5%	1/10W
R273	1-216-821-11	METAL CHIP	1K	5%	1/10W
R300	1-216-809-11	METAL CHIP	100	5%	1/10W
R301	1-216-841-11	METAL CHIP	47K	5%	1/10W
R303	1-249-425-11	CARBON	4.7K	5%	1/4W
R304	1-216-821-11	METAL CHIP	1K	5%	1/10W
R311	1-216-809-11	METAL CHIP	100	5%	1/10W
R312	1-216-809-11	METAL CHIP	100	5%	1/10W
R350	1-216-805-11	METAL CHIP	47	5%	1/10W
R360	1-216-833-11	METAL CHIP	10K	5%	1/10W
R361	1-216-833-11	METAL CHIP	10K	5%	1/10W
R362	1-216-841-11	METAL CHIP	47K	5%	1/10W
R363	1-216-821-11	METAL CHIP	1K	5%	1/10W
R364	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R365	1-216-841-11	METAL CHIP	47K	5%	1/10W
R367	1-216-841-11	METAL CHIP	47K	5%	1/10W
R370	1-216-821-11	METAL CHIP	1K	5%	1/10W
R371	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R372	1-216-821-11	METAL CHIP	1K	5%	1/10W
R373	1-216-821-11	METAL CHIP	1K	5%	1/10W
R374	1-216-821-11	METAL CHIP	1K	5%	1/10W
R377	1-249-417-11	CARBON	1K	5%	1/4W
R378	1-249-417-11	CARBON	1K	5%	1/4W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R407	1-216-849-11	METAL CHIP	220K	5%	1/10W
R408	1-216-849-11	METAL CHIP	220K	5%	1/10W
R411	1-216-821-11	METAL CHIP	1K	5%	1/10W
R412	1-216-821-11	METAL CHIP	1K	5%	1/10W
R502	1-249-401-11	CARBON	47	5%	1/4W
R503	1-216-845-11	METAL CHIP	100K	5%	1/10W
R520	1-216-864-11	METAL CHIP	0	5%	1/10W
R521	1-216-864-11	METAL CHIP	0	5%	1/10W
R522	1-216-864-11	METAL CHIP	0	5%	1/10W
R523	1-414-228-11	FERRITE	0uH		
R524	1-469-876-11	FERRITE	0uH		
R525	1-414-228-11	FERRITE	0uH		
R526	1-469-876-11	FERRITE	0uH		
R527	1-469-876-11	FERRITE	0uH		
R528	1-414-228-11	FERRITE	0uH		
R600	1-216-845-11	METAL CHIP	100K	5%	1/10W
R606	1-216-845-11	METAL CHIP	100K	5%	1/10W
R607	1-216-845-11	METAL CHIP	100K	5%	1/10W
R608	1-216-845-11	METAL CHIP	100K	5%	1/10W
R609	1-216-845-11	METAL CHIP	100K	5%	1/10W
R611	1-216-841-11	METAL CHIP	47K	5%	1/10W
R612	1-216-845-11	METAL CHIP	100K	5%	1/10W
R613	1-216-845-11	METAL CHIP	100K	5%	1/10W
R614	1-216-845-11	METAL CHIP	100K	5%	1/10W
R615	1-216-845-11	METAL CHIP	100K	5%	1/10W
R616	1-216-847-11	METAL CHIP	150K	5%	1/10W
R617	1-216-841-11	METAL CHIP	47K	5%	1/10W
R618	1-216-845-11	METAL CHIP	100K	5%	1/10W
R619	1-216-813-11	METAL CHIP	220	5%	1/10W
R620	1-216-813-11	METAL CHIP	220	5%	1/10W
R623	1-216-845-11	METAL CHIP	100K	5%	1/10W
R624	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R625	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R626	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R627	1-216-809-11	METAL CHIP	100	5%	1/10W
R628	1-216-809-11	METAL CHIP	100	5%	1/10W
R629	1-216-809-11	METAL CHIP	100	5%	1/10W
R630	1-216-833-11	METAL CHIP	10K	5%	1/10W
R631	1-216-833-11	METAL CHIP	10K	5%	1/10W
R700	1-216-845-11	METAL CHIP	100K	5%	1/10W
		< SWITCH >			
S600	1-786-458-11	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
S601	1-692-431-21	SWITCH, TACTILE (RESET)			
		< THERMISTOR >			
TH400	1-803-350-21	THERMISTOR, POSITIVE			
		< TUNER PACK >			
TU10	A-3220-887-A	TUNER UNIT (TUX-030)			
		< VIBRATOR >			
X90	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			
X601	1-795-877-11	VIBRATOR, CRYSTAL (27.648MHz)			
X602	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

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MINI JACK BOARD
****
(Included in the mounted MAIN board)

Ref. No.	Part No.	Description			Remark
		< JACK >			
J370	1-566-822-41	JACK (REMOTE IN)			
		< RESISTOR >			
R375	1-216-809-11	METAL CHIP	100	5%	1/10W

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A-3274-600-A SENSOR BOARD, COMPLETE
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For the parts on SENSOR board, replace the entire mounted board.

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A-3274-602-A SERVO BOARD, COMPLETE
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Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C4	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C5	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C6	1-165-897-11	TANTALUM CHIP	22uF	20%	10V
C8	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C11	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C12	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C13	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C15	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C16	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C17	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C18	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C19	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C20	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C21	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C22	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C23	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C25	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C26	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C27	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C29	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C31	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C32	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C33	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C34	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C35	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C36	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C37	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C38	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C39	1-162-927-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remark
C40	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C42	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C43	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C44	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C45	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C46	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C47	1-165-897-11	TANTALUM CHIP	22uF	20%	10V
C48	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C49	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C50	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C51	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C52	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C53	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C54	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C55	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C56	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C57	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C58	1-126-607-11	ELECT CHIP	47uF	20%	4V
C59	1-126-607-11	ELECT CHIP	47uF	20%	4V
C62	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C63	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C64	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C68	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C69	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C70	1-126-607-11	ELECT CHIP	47uF	20%	4V
C71	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C78	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C80	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C81	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C83	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN2	1-794-522-21	CONNECTOR, FFC/FPC (ZIF) 20P			
CN3	1-784-862-21	CONNECTOR, FFC (LIF (NON-ZIF)) 10P			
CN5	1-764-616-41	HOUSING, CONNECTOR (PC BOARD) 30P			
		< DIODE >			
D1	8-719-036-94	DIODE MM3Z5V6ST1			
		< IC >			
IC1	8-752-080-95	IC CXA2523AR			
IC2	8-759-836-79	IC BH6519FS-E2			
IC3	6-703-825-01	IC R1114N251D-TR-FA			
IC4	8-752-405-14	IC CXD2667R			
IC6	8-759-040-83	IC BA6287F-E2			
IC7	6-802-860-02	IC MB90473PFV-G-150-BNDE1			
		< COIL/RESISTOR >			
L2	1-414-398-11	INDUCTOR	10uH		
L3	1-414-398-11	INDUCTOR	10uH		
L4	1-414-398-11	INDUCTOR	10uH		
L5	1-216-864-11	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q1	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q2	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q3	8-729-010-25	TRANSISTOR	MSD601-RT1		
		< RESISTOR >			
R1	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R2	1-216-797-11	METAL CHIP	10	5%	1/10W
R3	1-216-797-11	METAL CHIP	10	5%	1/10W
R4	1-216-809-11	METAL CHIP	100	5%	1/10W
R5	1-216-805-11	METAL CHIP	47	5%	1/10W
R6	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
R7	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
R9	1-216-839-11	METAL CHIP	33K	5%	1/10W
R10	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R11	1-216-994-11	METAL CHIP	13K	5%	1/10W
R12	1-216-994-11	METAL CHIP	13K	5%	1/10W
R13	1-216-842-11	METAL CHIP	56K	5%	1/10W
R14	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R15	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R16	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R17	1-216-833-11	METAL CHIP	10K	5%	1/10W
R18	1-216-845-11	METAL CHIP	100K	5%	1/10W
R19	1-216-855-11	METAL CHIP	680K	5%	1/10W
R20	1-216-821-11	METAL CHIP	1K	5%	1/10W
R21	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R22	1-216-857-11	METAL CHIP	1M	5%	1/10W
R23	1-216-811-11	METAL CHIP	150	5%	1/10W
R24	1-216-821-11	METAL CHIP	1K	5%	1/10W
R25	1-216-845-11	METAL CHIP	100K	5%	1/10W
R28	1-216-833-11	METAL CHIP	10K	5%	1/10W
R29	1-216-805-11	METAL CHIP	47	5%	1/10W
R30	1-216-833-11	METAL CHIP	10K	5%	1/10W
R31	1-216-809-11	METAL CHIP	100	5%	1/10W
R32	1-216-809-11	METAL CHIP	100	5%	1/10W
R35	1-216-809-11	METAL CHIP	100	5%	1/10W
R36	1-216-809-11	METAL CHIP	100	5%	1/10W
R37	1-216-809-11	METAL CHIP	100	5%	1/10W
R38	1-216-864-11	METAL CHIP	0	5%	1/10W
R39	1-216-821-11	METAL CHIP	1K	5%	1/10W
R40	1-216-821-11	METAL CHIP	1K	5%	1/10W
R42	1-216-809-11	METAL CHIP	100	5%	1/10W
R43	1-216-809-11	METAL CHIP	100	5%	1/10W
R44	1-216-864-11	METAL CHIP	0	5%	1/10W
R45	1-216-809-11	METAL CHIP	100	5%	1/10W
R47	1-216-809-11	METAL CHIP	100	5%	1/10W
R50	1-216-821-11	METAL CHIP	1K	5%	1/10W
R53	1-216-809-11	METAL CHIP	100	5%	1/10W
R54	1-216-809-11	METAL CHIP	100	5%	1/10W
R56	1-216-809-11	METAL CHIP	100	5%	1/10W
R57	1-216-809-11	METAL CHIP	100	5%	1/10W
R58	1-216-809-11	METAL CHIP	100	5%	1/10W
R59	1-216-809-11	METAL CHIP	100	5%	1/10W
R60	1-216-841-11	METAL CHIP	47K	5%	1/10W
R61	1-216-841-11	METAL CHIP	47K	5%	1/10W
R62	1-216-841-11	METAL CHIP	47K	5%	1/10W
R63	1-216-809-11	METAL CHIP	100	5%	1/10W
R65	1-216-809-11	METAL CHIP	100	5%	1/10W
R66	1-216-809-11	METAL CHIP	100	5%	1/10W
R67	1-216-809-11	METAL CHIP	100	5%	1/10W
R68	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R69	1-216-845-11	METAL CHIP	100K	5%	1/10W
R70	1-216-845-11	METAL CHIP	100K	5%	1/10W
R76	1-216-853-11	METAL CHIP	470K	5%	1/10W
R77	1-216-819-11	METAL CHIP	680	5%	1/10W
R91	1-218-727-11	METAL CHIP	30K	5%	1/10W
R92	1-216-839-11	METAL CHIP	33K	5%	1/10W
R94	1-216-845-11	METAL CHIP	100K	5%	1/10W
		< VIBRATOR >			
X1	1-795-821-21	VIBRATOR, CERAMIC (22.57MHz)			
X2	1-795-822-21	VIBRATOR, CERAMIC (18.43MHz)			

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SUB BOARD
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Ref. No.	Part No.	Description
	1-792-195-11	CABLE, FLEXIBLE FLAT (14 CORE)
		< CONNECTOR >
CN801	1-817-159-11	SOCKET, CONNECTOR 14P
		< LED >
LED801	8-719-082-38	LED CL-270SR-C-TS (DISC SLOT ILLUMINATION)
		< SWITCH >
LSW801	1-771-883-31	SWITCH, TACTILE (WITH LED) (⏏)

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MISCELLANEOUS
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Ref. No.	Part No.	Description
2	1-792-195-11	CABLE, FLEXIBLE FLAT (14 CORE)
16	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)
56	1-694-976-11	CONDUCTIVE BOARD, CONNECTION
203	1-827-113-11	WIRE, PARALLEL (FFC) (10 CORE)
⚠215	8-583-116-03	OPTICAL PICK-UP KMS-242E/Q-RP
F300	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)
LCD901	1-805-076-11	DISPLAY PANEL, LIQUID CRYSTAL
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)

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ACCESSORIES
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Ref. No.	Part No.	Description
	3-251-286-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN)
	3-251-287-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN)

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PARTS FOR INSTALLATION AND CONNECTIONS
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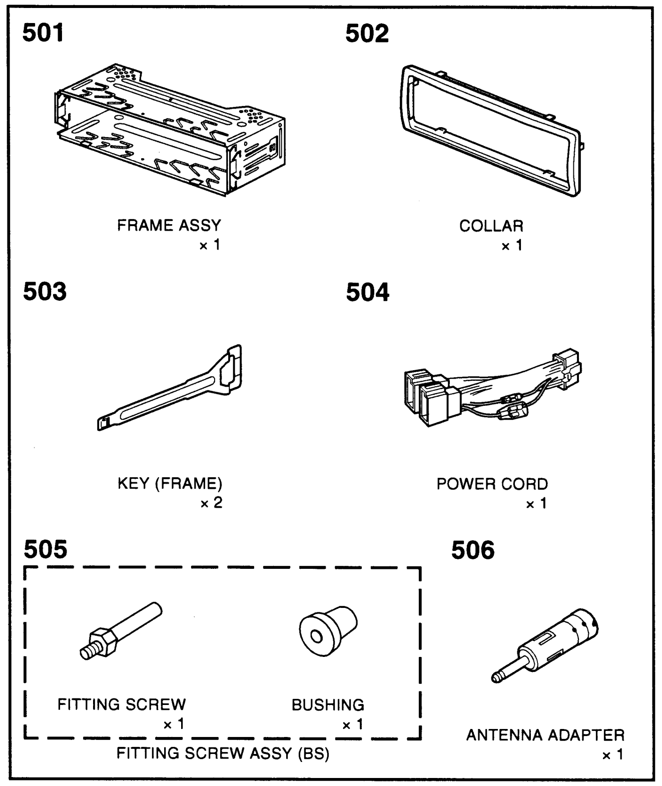
Ref. No.	Part No.	Description
501	X-3382-647-1	FRAME ASSY, FITTING
502	3-246-443-01	COLLAR
503	3-246-471-01	KEY (FRAME)
504	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)
505	X-3382-926-1	SCREW ASSY (BS), FITTING
506	1-465-459-21	ADAPTER, ANTENNA



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.